# WORKBENCH

35c / NOVEMBER/DECEMBER/1962

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*Compass Table*

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# I have enough capital to help good men who *may need more money than they make*

I've helped others in the past and my confidence in men has turned out all right for them—and for me. In my 40 years in business I've found that people—both men and women—have proved to be a better investment than trading in the stock market—at least for me. So I intend to go right on using my capital to help others who have the ambition and energy needed to help themselves, if given a little financial assistance.

*By Donald B. Warner*

My plan is no "get rich quick" scheme that will allow you to give up a regular job and a pay check. It offers a future, but the time to think about that will come later. Right now let's look at it only as a good way to make money in spare time without any door-to-door canvassing.

The work you will do is more like fun than work. It's enjoyable—never boring. It's easy to do. Also, it's satisfying in the creative sense because it involves making products that are beautiful to look at and highly prized by the people who want them.

But, it's work that brings in extra money *every time you spend an hour in your shop!* If you don't have orders for the product, you don't waste any time. But when you receive orders in the mail or from some neighborhood storekeeper, you put on your blue jeans, spend an hour in the shop and turn out a product that sells at $6.95 at retail. The raw materials cost you just exactly 58c. So you can see the profit to be made on just one order.

**And that brings up another very important point. Most of the people I've helped in this business are people who don't want anything to do with house-to-house selling. They just don't like the idea of asking others to buy something from them. That's why my plan is so wonderful. It shows seven different ways to get orders for this particular product without any personal house-to-house work. The customer sends the work to you.**

Your friends don't even have to know that you're making money. They will think your work is just a hobby. You can do a few pieces for them—just for practice—and they'll think you've just found a wonderfully interesting pastime. Your employer doesn't have to know that you're making money on the side because your whole shop can be set up in your basement, in a corner of your kitchen, in your garage or in a spare room. Wherever you have about three square feet of space, an electric outlet, and a water supply, you're in business.

I hear you asking "What is this product?" You probably think it's a novelty or a fad. You wonder how it would be possible to have a gross profit of more than $6.00 on a $6.95 sale if it wasn't something pretty junky.

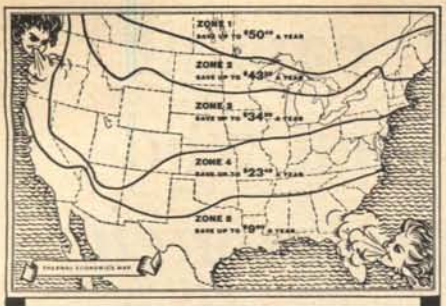
**Well, it isn't junky. It isn't a fad. It's a product that has been popular for years and years and years. It's a product that never goes out of style. It's a product that will have a steady and increasing market for all the years of your life. And, it isn't cheap looking. In fact, it looks like it might sell for much more than $6.95. The reason you can make it at such low cost is that the buyer—your customer—furnishes most of the raw material. You spend just 58c for the materials you need to turn his material into a thing of beauty and a joy forever.**

Your next question might be, "If this is so great, why isn't everyone doing it?" That's a natural question and I can give you an answer so logical that you will see it is true. This is the reason: Not everyone can qualify! The equipment you need to start this business costs money. The total cost is no more than you'd spend for a new refrigerator or a TV set. But—since I help ambitious and serious minded men by financing about three fourths of the total cost out of my own money, I want to know the kind of man—or woman—I'm dealing with. And like I said, not everyone can qualify.

You may be able to meet the requirements. But before you even think about making even a small investment, I'd like to send you a big illustrated circular and a letter which tells all about the business. See for yourself exactly why the demand for this product will never diminish. See for yourself how orders come to you without house-to-house selling. See for yourself how much fun it is to turn out these beautiful products.

**Then you can decide if you want to fill out the form that invites me to help finance your start. I have the capital—all I need—and I'm willing to use it to help men who want to help themselves to the extra money that is needed today by so many thousands of families.**

There is no charge for the circular or letter. Just your name and address is all I need. It will come to you by prepaid mail. No salesman will call to bother you. No high pressure, because the men I back with my money must be men who make their own decisions on their own appraisal of the business. So, send me your name today. I think you'll be glad you saw this invitation. An ordinary postal card will do. Mail it to Donald B. Warner, 1512 Jarvis Avenue, Chicago 26, Illinois. Dept. M-6-M.

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# WORKBENCH volume 18 number 6


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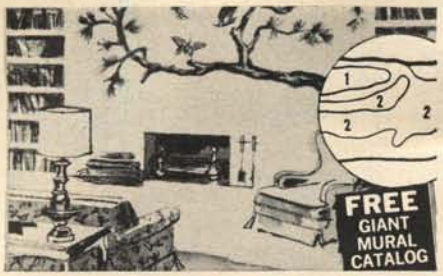


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"All of this would not have been possible," says Bert Caldwell, "without my MAGNI-FOCUSER. I call it 'My Real Eyes.'" Mr. Caldwell goes on to say, "I was out of hobby work for several years because I just couldn't see fine detail any more. Then someone recommended MAGNI-FOCUSER and I was back in business. MAGNI-FOCUSER is a binocular magnifier that gives 3-D magnified vision. I wear it over my eyeglasses. This leaves both my hands free for all the intricate work I do. MAGNI-FOCUSER acts as an eyeshade, too, by shutting out all overhead and side glare. To resume normal vision, I merely raise my head slightly." MAGNI-FOCUSER comes in 3 models—1¾" magnification at 14", 2¼ at 10", 2¾ at 8". **Order from EDROY PRODUCTS CO., Dept. A, 480 Lexington Ave., New York 17, N. Y. Costs only $12.50. Absolute money-back guarantee if you're not delighted.**

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# Letters to the Editor

## CORRECTION

In the article Tray-Top Table, the line, "When you have found these centers, mark ⅜ in. each way for the mortises . . . ", should read, "mark ½ in. each way for the mortises . . . "

Also, in the line "Bore the hole in the bottom member of the cage slightly larger than the 2⅞-in. portion of the table column," the measurement should be 1-9/16 in.

Dear Mr. Hedden:

Thought you might enjoy seeing some of the work done by a retired lawyer. The snapshot shows a bust of myself carved from a block of Honduras Mahogany.
Bill Foss, Coldwater, Ohio.

*Dear Mr. Foss:*
*Note in the newspaper clipping you enclosed that the carving took 6 months, and that you used regular shop tools for the job. Well done, indeed. Wonder how you managed to find the time, since you were making redwood planters, carved bowls, stamp boxes and a grandfather clock along the way.*

Dear Editor:

I have found almost everything that I wanted in the WORKBENCH, it is a fine magazine. The one thing I have not been able to find is an article describing how to enclose an old-fashioned bathtub. Is it possible to find this information?
Mr. J. R. Newark, Delaware

*Dear Mr. J. R.:*
*Yours is the first request for an article describing this project. However, if enough readers request it, we certainly will find someone to do the story for us. We do know that more and more old, quite large homes are being purchased and renovated, and the bathtubs in these homes certainly will be the old-fashioned kind.*

Dear Mr. Hedden:

Am sending two photos of Christmas decorations I made for our porch. Designed and made them myself. I have enjoyed WORKBENCH very much, even though I am a woman, because I enjoy working with wood. Want to renew my subscription.
Beverly Harbison, Milan, Mich.

*Dear Miss Harbison:*
*Well done, indeed. We can see your home is a cheerful place during the holidays. Am sending you a subscription blank so you can renew your subscription.*

Jay W. Hedden

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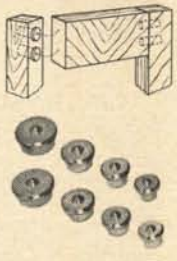

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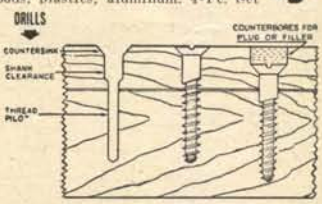


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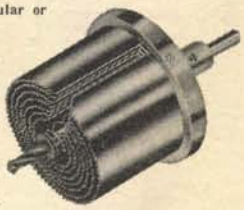

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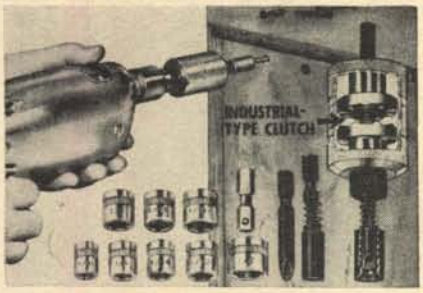


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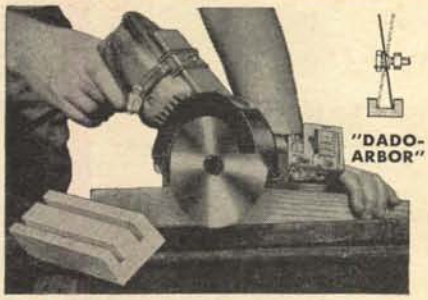

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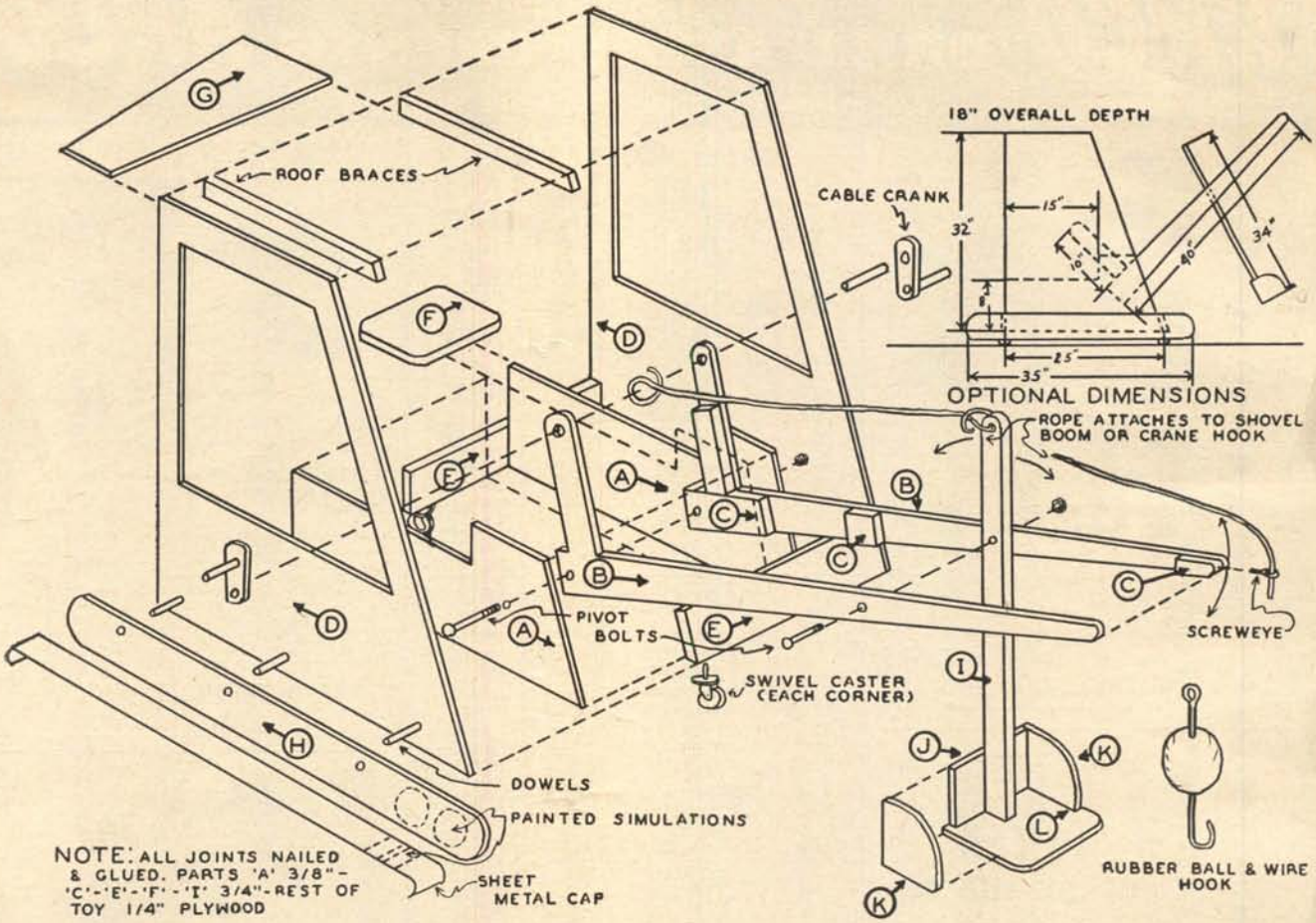
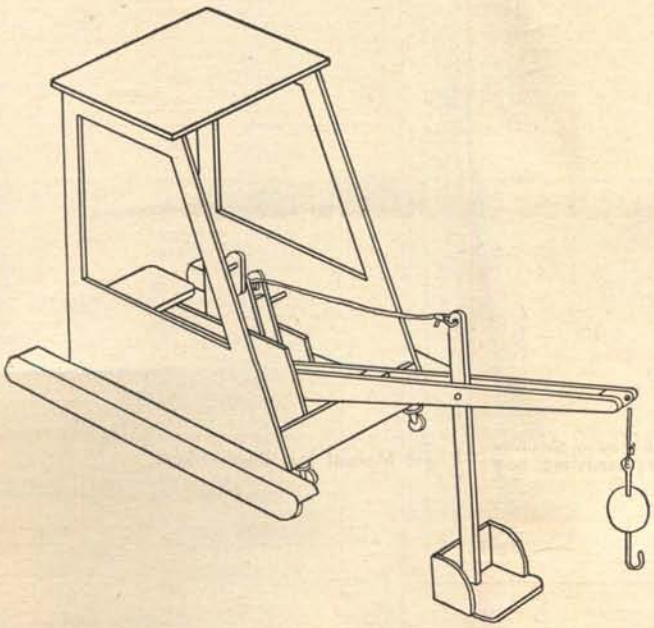



# Crane-Shovel Sidewalk Toy

**M. H. SLUTZ**



THRILL YOUR four or five-year-old with this action toy in which he can ride. Pulling a pin permits removal or installation of the shovel boom, so a hook can be fitted on the rope and the toy operated as a crane. Optional dimensions are given, as each toy will have to be built to fit the youngster who will use it. Also, if desired, the cab sides and roof and the sides of the simulated track can be eliminated.

Start construction by cutting boom parts, B. Cut spacers, C, and assemble boom with glue and finish nails. Cut boom anchor frames, A, and attach cab supports, E, (if cab is used), to front and back of frames. Attach seat, F, to rear frame. Position boom, and *drill holes through* boom and anchor frames for pivot. Install casters at four corners of unit. Cut shovel boom, I, attach shovel made from pieces J, K and L. Drill the ends of the boom arms for the crank made of ½-in. dowels and install it. Make the cab sides, D, cutting windows as indicated. Attach roof, G, bracing as shown. Cut track sides, H, attach to cab sides with dowels 2 or 3 in. long. Tack on a sheet-metal cap to the track sides and cab to simulate the track. Paint on the track treads, if you desire more realism. △ △

# WOODWORKERS

## YOUR COMPLETE MONEY-SAVING BUYING GUIDE for 1963 IS NOW READY

**NEW**

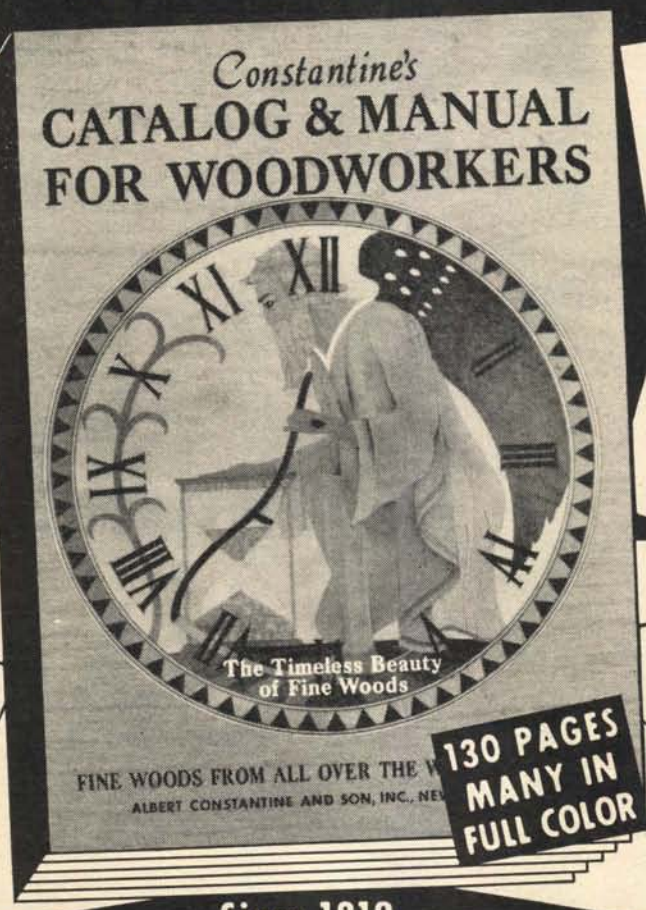
Dozens of plans for exciting new projects, carefully selected from the best available. No matter what you'd like to build—from a birdhouse to a built-in storage wall—you're sure to find the plans you'll need to make the job go quicker and easier in this big special plans section . . . and they're all priced really LOW too!

**NEW**

A new collection of veneers never before available to craftsmen anywhere: Benge, Blackwood, Chenchen, Ireme and Mansonia are some of the new additions to the most complete assortment of finest-quality, rare foreign and domestic veneers available anywhere in the world! All at prices far below what you'd expect to pay!

**NEW**

Exclusive new Pre-Cut plus Inlaid Wood Picture Kits: Father Time Clock (pictured on cover of catalog) many more—including an 18" x 38" rendering of the "Last Supper" containing more than 550 pieces precut from the finest veneers available, all ready to glue in place to create a true masterpiece in wood.

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Oak Blanks for making steak plates and chopping blocks for the kitchen —already laminated and ready for finishing . . . Ash Blanks for baseball bats—from the same source that provides the stock from which the bats for the biggest sluggers in the National League are made. Think how pleased your son—or any other boy—will be to have a bat made especially for him!

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Complete Wood Carving Department featuring the largest selection of fine foreign and domestic woods for carving and sculpturing available anywhere . . . plus a complete assortment of lignum vitae mallets and other professional carving tools, books on wood sculpturing, etc. . . . everything for both amateurs and professionals.

**NEW**

Complete Pipe Maker's Department . . . everything you'll need to make your own fine briar pipes at a fraction of the cost of ready-made pipes—imported Spanish briar wood blocks by the hundreds, roughed out for easy finishing . . . plus rubber stems, etc.

**NEW**

Exclusive Rainbow Veneers. Here are the finest veneers in all the world dyed in gorgeous rainbow hues—from subtle pastels to rich, vibrant, full-bodied colors—to add more beauty, drama and interest to all your creations in wood. And you'll be amazed at the low prices!

**NEW**

You'll find page after page of exciting new items too numerous to mention here—unusual new hardware, the latest in tools specially designed to fill the needs of both professional and amateur woodworkers—but see for yourself . . . mail the coupon below today . . . NOW!

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Enclosed 25c for new 1963 Constantine Catalog and Manual for Woodworkers.

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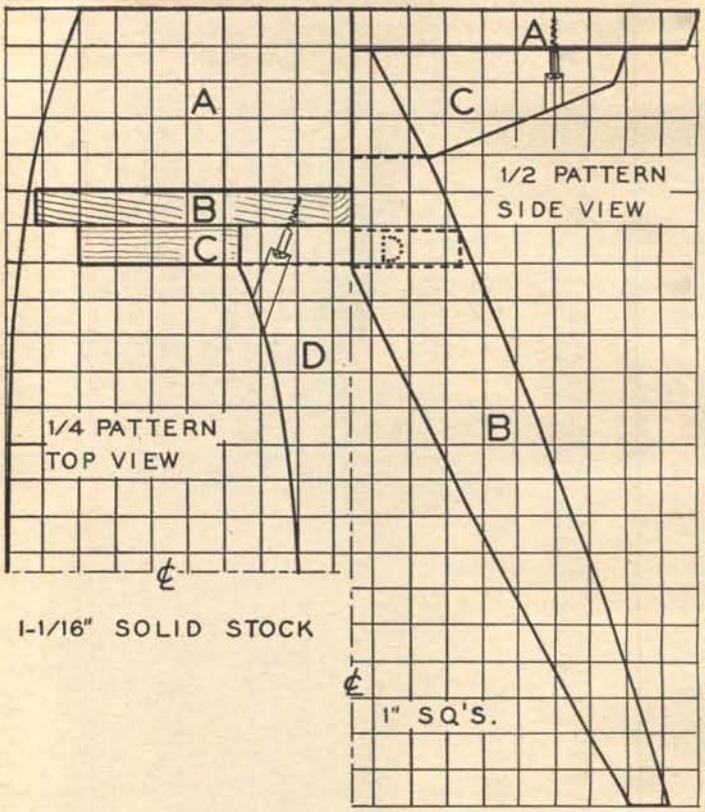
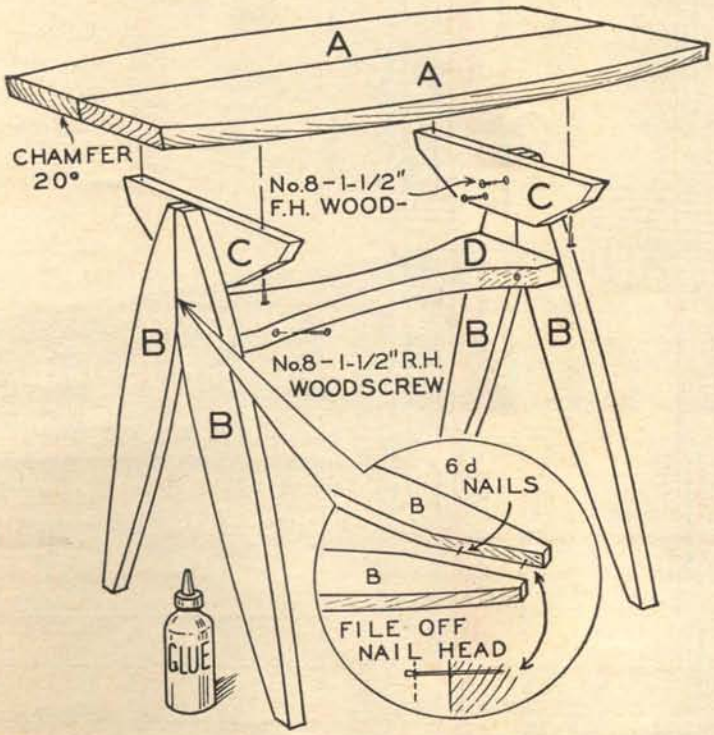



# Compass Table

ROBERTA FAIRALL




SOLID HARDWOOD in a thickness of $1\frac{1}{16}$ or $1\frac{1}{8}$ in. is the best material for this contemporary table with its simple lines. Birch would be excellent, but the other furniture in your home may dictate walnut or other hardwood. Start construction by making full-size patterns to accurately show all angles, curves and the positions of fasteners. Use the patterns to make the outlines and to check positions of the joints. Glue the top boards and each leg unit together, reinforcing the butt joints with pins made by cutting off the heads of nails as indicated. Assemble the units, then round off all sharp edges with a plane or rasp, then smooth with sandpaper. Stain lightly, if desired, then seal with thinned varnish. Apply two additional coats of spar or bar-top varnish. Reduce the gloss of the last coat with fine steel wool, then clean and apply paste wax.

Materials List, All $1\frac{1}{16}$ or $1\frac{1}{8}$-in. hardwood.

A—Top boards, 9½" x 31", 2 req'd.
B—Leg boards, 3¼" x 22¾", 4 req'd.
C—Top braces, 3" x 15", 2 req'd.
D—Rail, 6" x 19", 1 req'd. △△

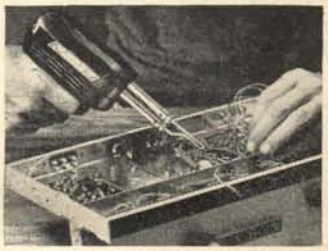
# Weller® Dual Heat Soldering Gun

There's no tool like a Weller Dual Heat Gun for quick, easy soldering and scores of household repairs. Pull the trigger—tip heats instantly and spotlight illuminates work. 2 trigger positions give you a choice of two tip temperatures. You can switch instantly to the heat best suited for the job. And by using high heat only when necessary, you prolong tip life.

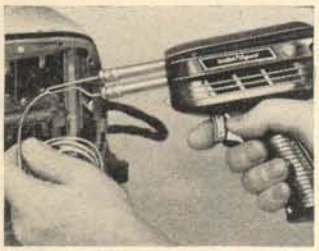
Tip is made of copper for superior heat transfer and premium-plated for rigidity and long life. Accessory tips are available for heat sealing, cutting and smoothing.

Over 5 million Weller guns have been sold. They're used by professional servicemen and homecrafters the world over. All Weller guns are UL approved and guaranteed one year against defects in material and workmanship.

Weller dual heat guns are available in many models with wattage ratings to suit your needs. They are also supplied in plastic case kits that include accessories.



**A must for hi-fi kit building.** Assures noise-free connections. Use low heat when soldering near sensitive components, high heat for chassis connections.

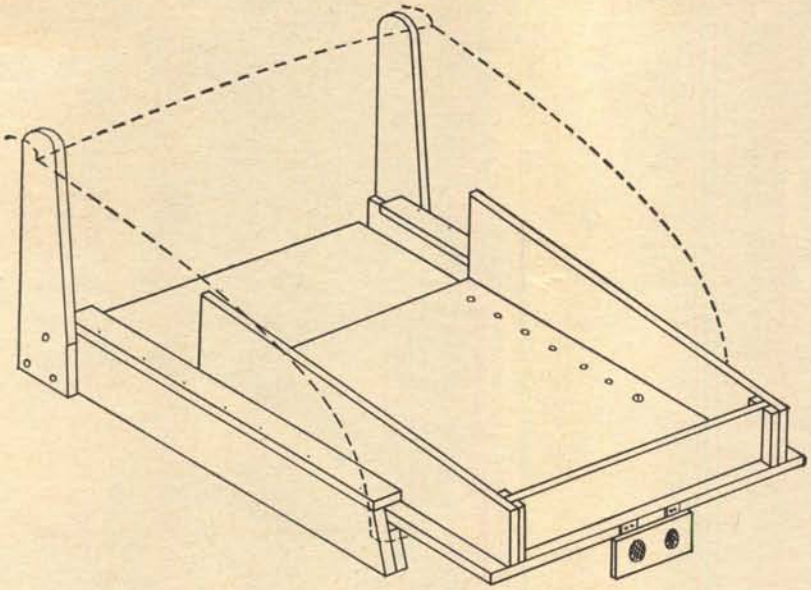


**Saves on electrical repairs.** Enables you to do many appliance and electrical repair jobs yourself. Also useful for many different crafts and hobbies.

**Mends metal.** Whether patching holes, sealing seams or joining metal parts, your Weller gun will pay for itself on scores of repair jobs around your home.

**Does more than soldering.** With cutting and smoothing tips you can cut plastic tile, repair plastic toys, seal plastic bags, repair furniture dents, etc.

**WELLER ELECTRIC CORP., 601 STONE'S CROSSING ROAD, EASTON, PA.**



# Adjustable Auto-Trunk Extension

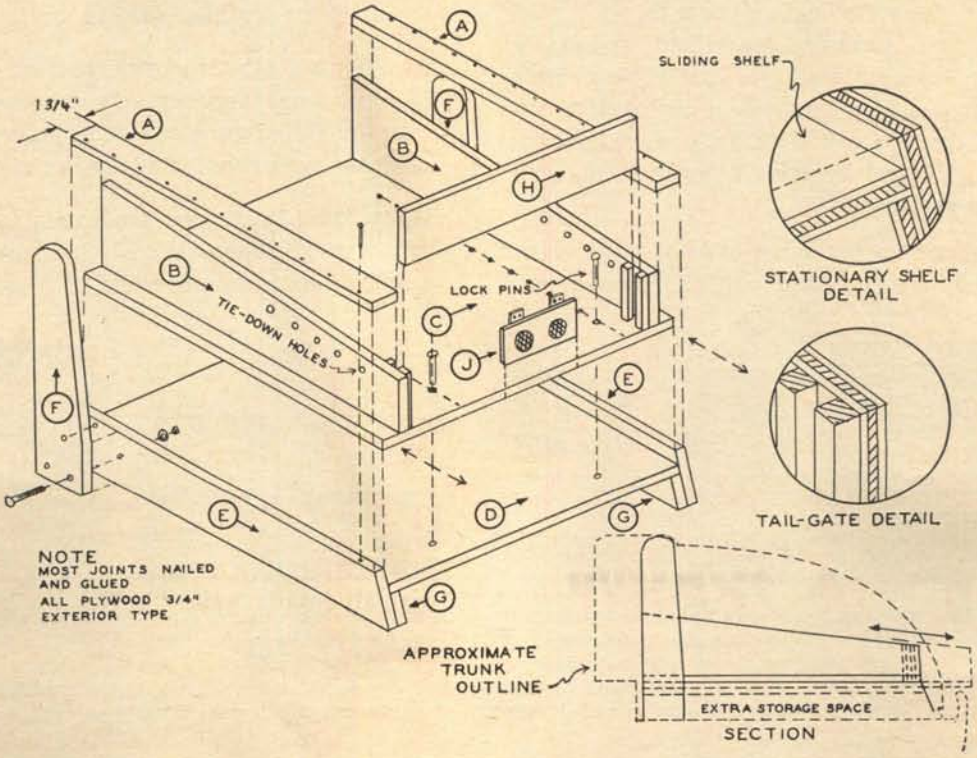
IF THE TRUNK of your car is just a little too short when you try to haul a piece of plywood or some lumber home from the lumberyard, or does not have quite the capacity you would like when it comes to carrying camping gear for that weekend trip, this trunk extension might be the answer to your problems.

Although definitely not designed for heavy-duty hauling, the extension will handle many short-trip hauling jobs of bulky items.

The unit may be installed permanently in the trunk, or just fitted in place when needed. The extension shelf slides out to provide as much as 6 sq. ft. of extra storage space, and can be lengthened in 2-in. increments by means of lock pins. When the slide-out extension is completely retracted, the trunk lid can be closed; when it is extended, the lid is held by tie-down straps or ropes fitted in holes in the extension sides.

Dimensions will vary depending on the size and type of car trunk. First, measure depth, width and over-all height of the trunk area. Note that the upper ends of the vertical members catch behind the hinge ledge of the trunk, locking the extension in place, making it unnecessary to fasten the unit. Cut the side members about 1½ in. higher than the rear ledge of the trunk, then install cleats that will position the upper surface of the fixed shelf just above the edge of the ledge. Cut the sliding shelf ⅛ in. narrower than the fixed shelf for sliding clearance.

Be sure that the sides of the fixed part of the unit are low enough to allow the trunk lid to close. Also make sure the sliding shelf is positioned high enough to clear any bumper guards on the car. Paint all wood with exterior enamel, then wax all sliding surfaces. △ △



# So you want to buy a saw

Here are 5 spectacular saw specials. The best names, the biggest savings . . . timed just right to help you fit one into *your* plans and budget.

Special Introductory Price **$44.95**

**New PORTER-CABLE Model 300 Bayonet Saw** is unequalled in sawing flexibility, fastest cutting saw of its type. Features failure-proof motor, guaranteed for 2 years.

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**DELTA Super 990 9″ Radial Saw**—a versatile one-tool workshop. Backs up horsepower with cutting power—has all "most wanted" features.

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**Slightly higher in the West*

**$104.50 ***
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**PORTER-CABLE Model 170**—fastest cutting 7″ Portable Saw made . . . yours now at a big $10.00 savings. Whizzes through stock 2½″ thick.

Own one today. Visit your Delta, Porter-Cable or COMPACTOOL dealer. For FREE booklet with all details, write: SAWS, Rockwell Manufacturing Company, 562L N. Lexington Ave., Pittsburgh 8, Pennsylvania.

**Rockwell**
MANUFACTURING COMPANY

### Cornucopia Centerpiece Candles

A mischievous winking Santa stands on each beautifully gilded "Horn of Plenty" that is decorated with Christmas symbols. A perfect pair for your festive holiday table or as a thoughtful gift. About 5½" tall. Only $1.25 a pair. Also send for the Free Gift Catalog of other unusual gifts and gadgets, colorfully illustrated with over 600 different gift ideas. Yours free! Write Adriane, Inc., 2-182 Finch Merchandise Mart Park Square, St. Paul 1, Minnesota.

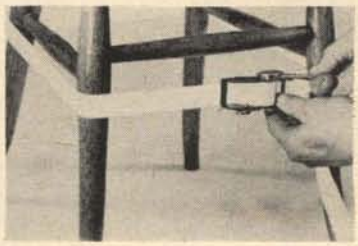
### Septic Tank Trouble?

Northel Reactivator works to keep septic tank and cesspool clean. A bacterial concentrate breaks up solids and grease—works to prevent overflow, back-up, odors. Regular use can save costly pumping or digging. Simply mix dry powder in water, flush down toilet. Non-poisonous, non-caustic. Guaranteed to reactivate septic tank, cesspool. Six months' supply (23 ozs.) only $2.95 postpaid. Northel Distributors, WM-11, P.O. Box 1103, Minneapolis 40, Minn.

# SHOPPERS' SHOWCASE

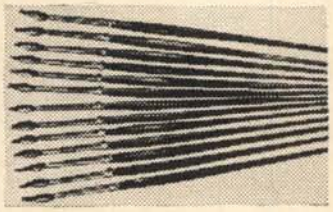
**COMPACTOOL SAW** is light enough, (30 lbs.), to carry right out of the store, small enough to permit hiding until Christmas. Size and weight are deceptive, according to manufacturer, as tool has accuracy, capacity and power of many big stationary tools. Table saw is just one of a number of compact stationary power tools that are available. Excellent machines for the apartment-dweller, homeowner with small shop. Rockwell Mfg., Pittsburgh 8, Pa.

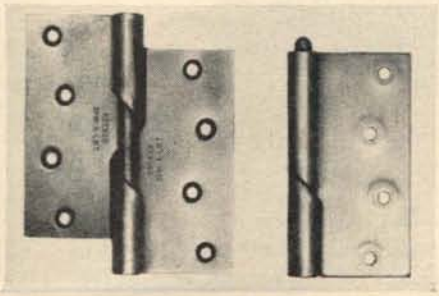
**BY MEANS OF RATCHET** a tremendous pressure can be exerted with this clamp that has a 600-lb. break-strength nylon webbing 12 ft. long. Webbing acts as padding, making clamp ideal for working on furniture and fine finishes. Clamps also are handy for lashing loads to car-top carrier, holding down trunk lid when carrying cargo. Web Clamps are $4.95 each. For name of nearest dealer write: Norfolk Prod. Corp., Norfolk, Conn.



**SMALL ENOUGH** to fit in the palm of your hand, this compact drill motor still packs the power of a conventional-size unit, has a unique space-age diode inside the motor to change 115-volt a.c. current to d.c., stator is solid unit with no wires, armature has welded, rather than soldered connections. Handle is plastic, unit weighs just half as much as standard drill. Priced at $32.50 from Thor Power Tool Co., 175 N. State St., Aurora, Ill.

**CAMEL'S HAIR BRUSHES** are an aid to any hobbyists or craftsman, for cleaning small machinery, camera lenses, guns as well as for painting and hundreds of other uses. Get 40 of these real-bristle brushes in assorted sizes for just $1.00 plus 25 cents for handling. Keep some in the workshop, give some to the youngsters for school or hobby work, present some to your wife. Sold with money-back guarantee by Novel Mfg., 31 Second Avenue, N. Y.





### Spiral-Lift Door Hinge

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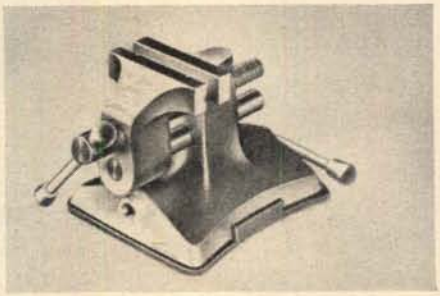

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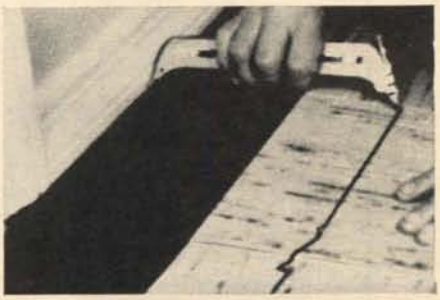
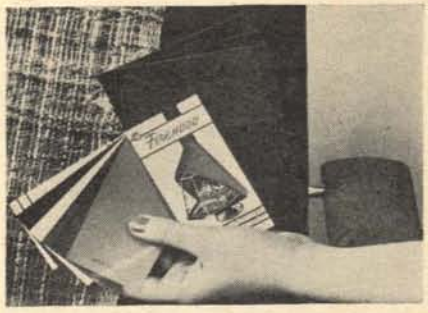


### Contour Scriber

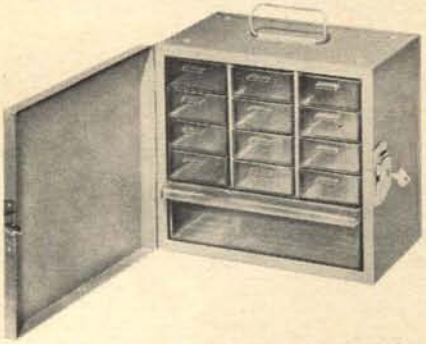
The Hand Tool of 1001 uses at home and shop, men and women, mechanics and do-it yourself—young and old—duplicate irregular and parallel surfaces for cutting on tile, wood, metal, etc., adjustable 0-12⅜". Available by hardware, lumber, and tile dealers. $1.30 plus 8¢ postage. Sold by Charles Machine Co., P. O. Box 63-721C, Springfield, N. J. and Canada, $1.65 plus 20¢ postage.

## Fireplace-Color Selector



CONICAL, OPEN-HEARTH fireplaces can be placed anywhere in home, need no extra foundation. Porcelain runs from hearth to ceiling; choose one of 9 colors. For free FireHOOD color selector that has die-cut fireplace so colors show through: Dept. FS-1, Condon-King Co., Inc., 1247 Rainier Ave., Seattle 44, Wash.

## Small-Parts Cabinet



FITTED WITH A LOCKING DOOR, this steel cabinet has plastic drawers, one large, 12 small. Can be used in the shop, as a first-aid kit, wherever small items must be kept neatly and safely. Retails for $7.50 from Akro-Mils, Inc., 813 E. Market St., Akron 9, Ohio.

## Monogrammed Money Belt

Ideal for Xmas! Only $2.98 postpaid. This genuine, top-grain cowhide belt adds a handsome note to his attire, while "secret" zippered inner pocket holds currency far from prying eyes. 1¼" wide belt is clinched with gleaming buckle sporting his 2 or 3 initials. Available in brown with gold plated buckle; black with silver rhodium buckle. Specify waist sizes 28" to 44", color and initials. Order Now! Roycraft Industries, 222 W. 39th St., Dept. BN-1, Kansas City 11, Mo.

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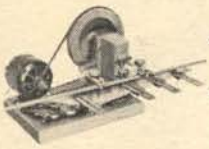
Sharpens all types of circular saws—rip, crosscut or combination toothed—from 5" to 44" in diameter. Attachments available for a variety of other sharpening jobs, too.



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Cuts a full set of teeth, either rip or crosscut, in less than a minute. Operated either by motor or by hand crank.

**MODERN LAWN MOWER SHARPENER**

The complete shop in one machine. Accurate to 1/1000th of an inch. No hand filing necessary—blades are precision ground to their extreme edges.

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Automatically sets band saws up to 1½" in width, as well as all carpenters' hand saws, either rip or crosscut. Available in two models.

**FOLEY LAWN MOWER SHARPENER**

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## Remodeling Booklet

PRESENTED IN A PROBLEM-SOLUTION style, this 16-page guide provides practical information to a home owner on improving his residence. Illustrated in full color, includes an easy way to measure a room for paneling. Send 25 cents in coin to: Home Improvement Ideas, Home Service Bureau, 29 N. Wacker Drive, Chicago 6, Ill.

## Tape-Recording Booklet

FOR THE HI-FI ENTHUSIAST who is considering, or has, a tape recorder, this booklet offers 16 pages of useful information on the types, uses and editing of recording tape. From Triton Electronics, Inc., 62-05 30th Ave., Woodside 77, N. Y. Enclose 10 cents for postage, handling.

## Radial-Arm Kit

TOOL KIT CONTAINS 33 TOOLS, including plywood blade, tool guard, dado cutters, cup grinding wheel, wire wheel, disk sander, drum sander, set of wood bits, buffing and polishing set, shaper cutters and radial-arm textbook. For information: Dept. M, DeWalt, Lancaster, Pa.

## Free Booklet

HELPFUL HINTS on how to select doors that will add distinctive charm to your home are shown in this color booklet that has over 100 illustrations of interior and exterior door applications. RIMCO, Rock Island Millwork Co., Mfg. Div., Rock Island, Ill.

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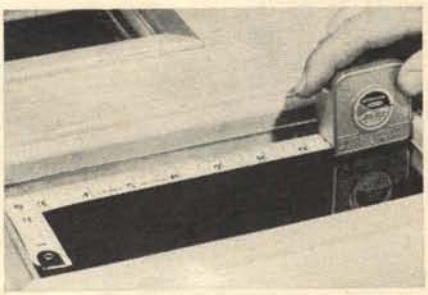

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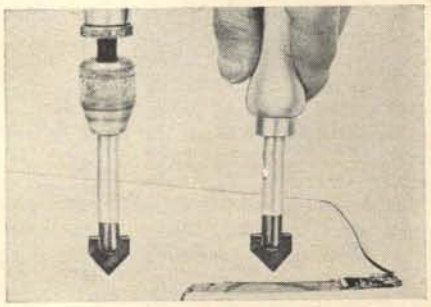

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# Fabulous Finishes For Fir Plywood

R. J. DeCRISTOFORO

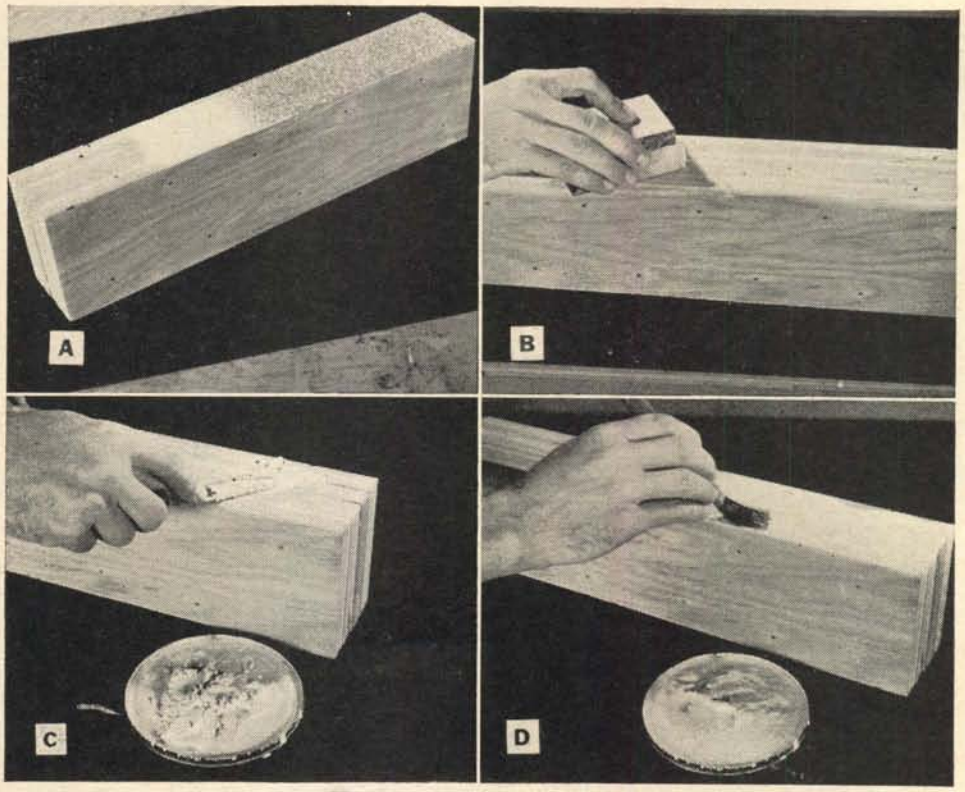
(PHOTOS BY EYMANN)

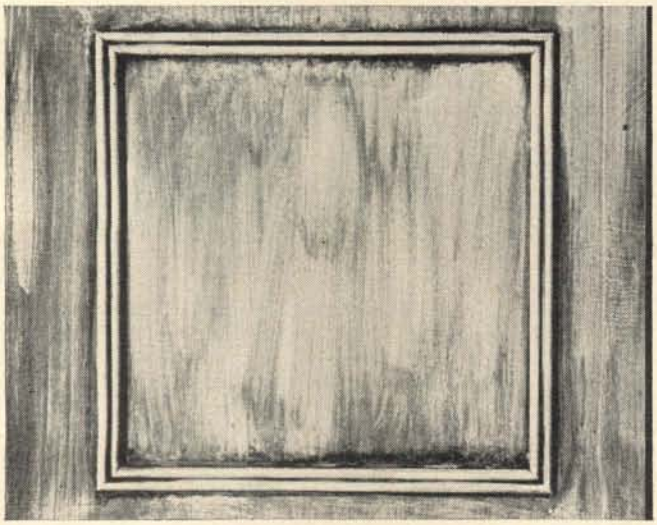
CONVENTIONAL FINISHING MATERIALS applied with special techniques to fir plywood will give that low-cost, easily-worked paneling an extremely attractive appearance. Our cover is one example; the hi-fi cabinet has both "Forest Fire" and "Heirloom" finishes applied to the fir plywood used in its construction.

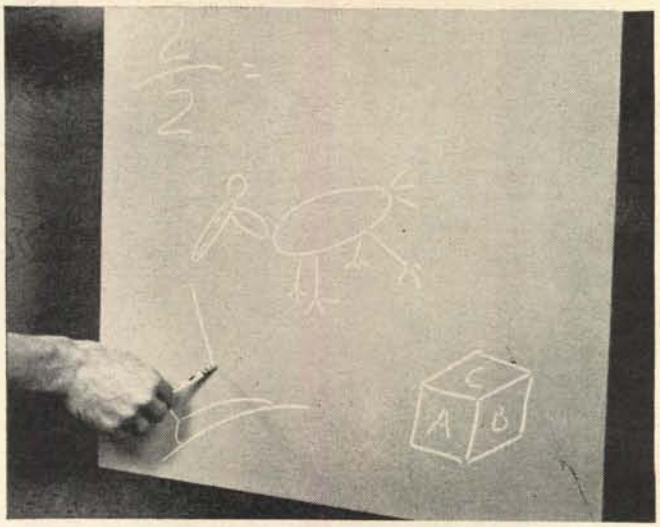
First, banding or taping on the edges of fir plywood is not necessary if filler and undercoat is used, Fig. 1. Many of the finishes described then can be applied so the plywood has the look of solid stock.

While most finishes require careful sanding, Heirloom, Fig. 2 looks best if scratches and nicks are intentionally produced. In place of the turpentine-and-linseed-oil glaze, commercial glazes are available. School Days, Fig. 3, can utilize the "artistic" efforts of your youngsters. Forest Fire, Fig. 4, is a strikingly attractive finish. After burning with a torch sand the wood carefully, then apply a wash coat of shellac (a 50-50 mix of shellac and alcohol). Steel wool after shellac is dry, then apply two coats of satin-finish varnish. Sand again, then use paste wax. Silver Haze or Gold Haze, Fig. 5, can be made subtle by light wiping, given stronger characteristics by heavy rubbing, of the gold or silver paint. Textured Gold and Textured Silver, Fig. 6 is similar to Haze finish, differs in method of wiping off applied metallic paints. Driftwood finish, Fig. 7, is controlled by color of stain used. When stain is completely dry, protect with a single coat of semi-gloss varnish. Stardust, Figs. 8, 9 and 10, is feminine finish used where brightness and distinctive atmosphere are desired. When bronzing powders have set firmly in dried enamel, brush off excess. Another coat of varnish then can be applied. Black n' Gold, Fig. 11, utilizes strong-grain characteristics of fir plywood to provide strong contrast between lighter and darker areas. Don't rub off the gold paint, just wipe it smoothly. When paint is dry, apply one coat of dull varnish as protection. Speckled finish, Fig. 12, is a utility finish that can be used almost anywhere in the home. For an unusual stained effect, Figs. 13 and 14, a new type stain produces equal toning on dark and light pieces of wood. △ △

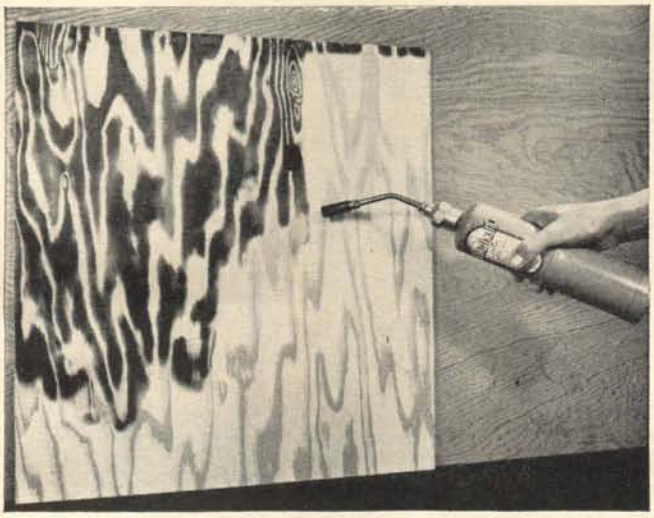
1. Painted finish effectively hides the raw edges of plywood. In photo A, from left to right; raw edges, holes filled and undercoat applied, finally the application of multi-color paint. In Photo B, "sandwich" of four plywood edges is sanded smooth with paper wrapped around block. In photo C holes are filled with wood putty that is carefully packed into all imperfections. Apply plenty, excess is sanded off easily. In photo D a thin mixture of wood putty is brushed on as filler to seal the smaller imperfections. Flow it on generously, allow it to dry completely, then sand smooth. Any kind of paint now can be applied to the edges, as the grain is sealed completely. A most effective way is the use of multi-color paints. The various colors of flecks in this type paint will assure the look of solid lumber.



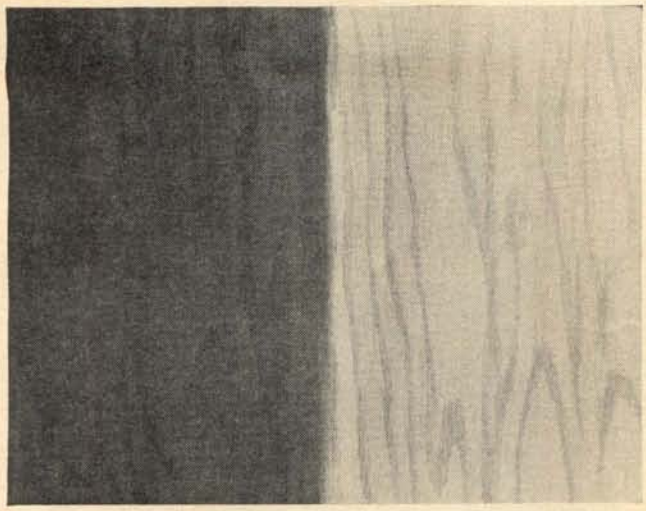


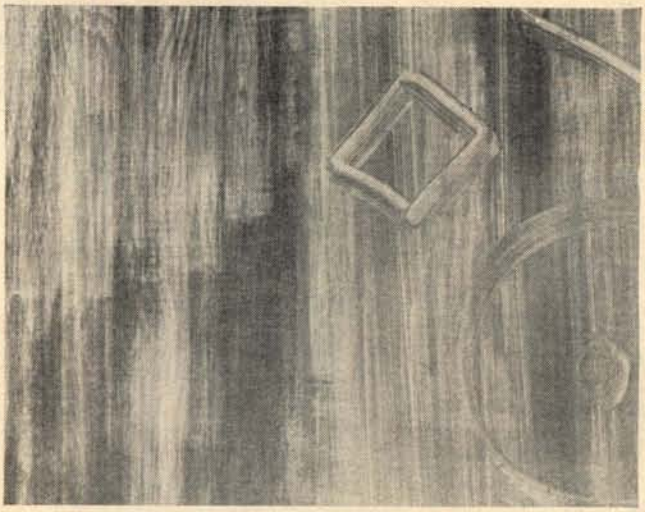
2. *Heirloom* finish is modified, antique white. "Careful Carelessness" is needed so sanding is not complete, nicks and scratches are not removed. First, apply white semi-gloss enamel, then apply a "glaze" of equal parts linseed oil and turpentine mixed with burnt umber.



3. For *School Days* finish apply full undercoat after careful sanding. White is good, but can be tinted. When undercoat is dry, brush on heavy coat of latex-base paint, let it set for about fifteen minutes. Finally, draw designs with eraser end of ordinary wooden pencil.

4. *Forest Fire* is really unusual finish (it and Heirloom are used on the hi-fi cabinet on the cover), that appears quite dark, but lightens as it is sanded. Depth of burning is controlled by distance of torch from wood. Soft portions darken, hard grain does not, producing strong contrasts.

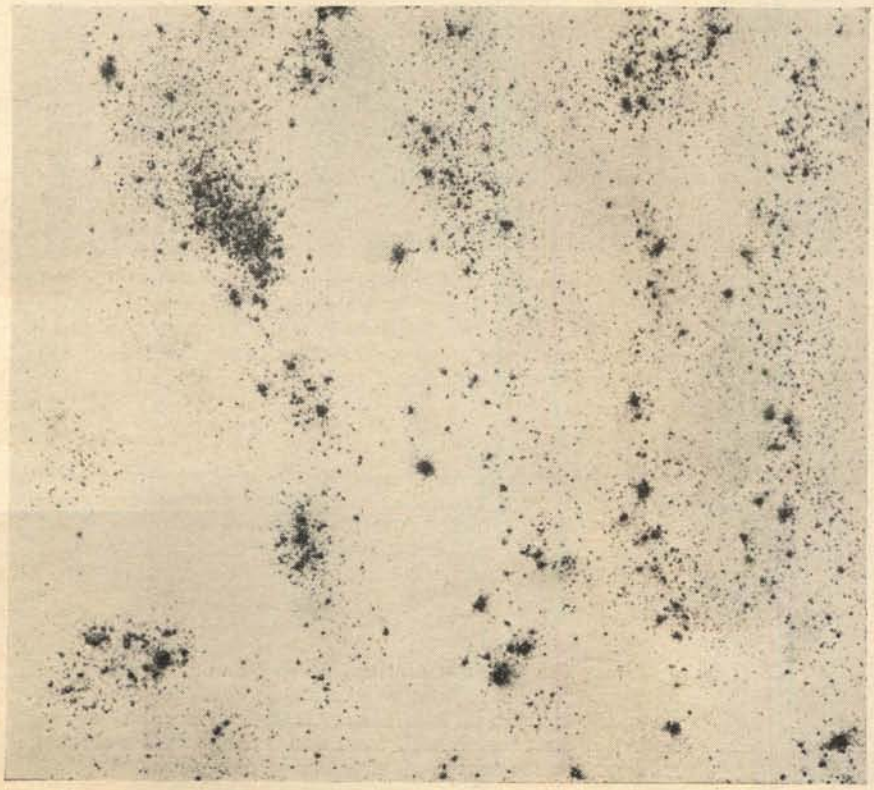




5. *Silver Haze,* left, *Gold Haze,* right is produced by applying ready-mixed gold or silver paint, then rubbing it in with cloth parallel to grain. Next, dampen lint-free cloth with turpentine, wipe in long strokes in line with grain. Protect with coats of shellac and varnish.

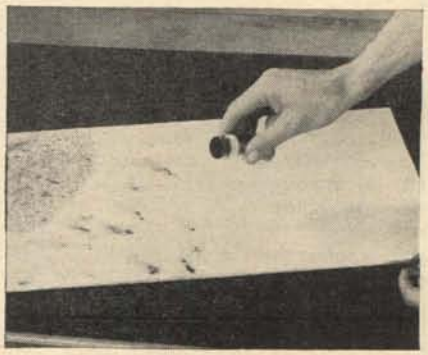
6. *Textured Gold* or *Silver* requires heavy application of the paint, then a flat pad of cloth dampened with turpentine is moved in short parallel strokes to produce finish as in left side of photo. Designs, as in right side of photo are made with cloth on finger as a "brush".

7. *Driftwood* finish is ideal on brushed fir plywood. First, apply a base coat of flat or semi-gloss enamel with a brush and let it dry. Apply stain with a cloth, using generous amount. Let stand fifteen minutes or more, then wipe away excess with clean cloths, wiping in long-parallel strokes in line with grain. Hit high spots only.



8. *Stardust* has feminine appearance, starts with full application of semi-gloss enamel that is allowed to dry, then steel-wooled smooth. Apply a brushed-on gloss varnish, allow it to dry about one half hour, then sprinkle on bronzing powders.

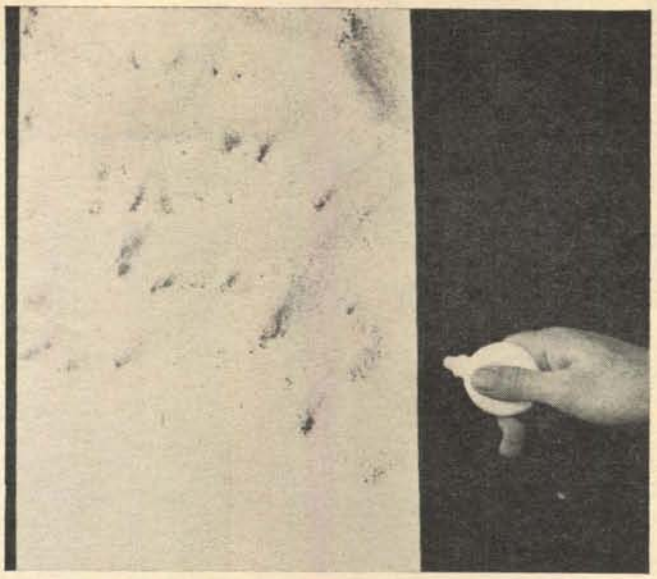
9. For misty effect on *Stardust,* blow gently on powder after it has settled on varnish. On horizontal surfaces, powder is simply sprinkled on. Base coat can be any color, but keep in mind that it must provide definite contrast to bronzing powder's gold color.

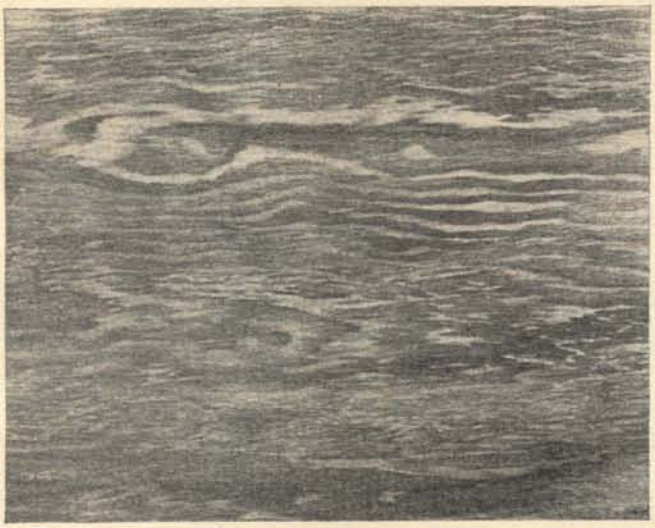


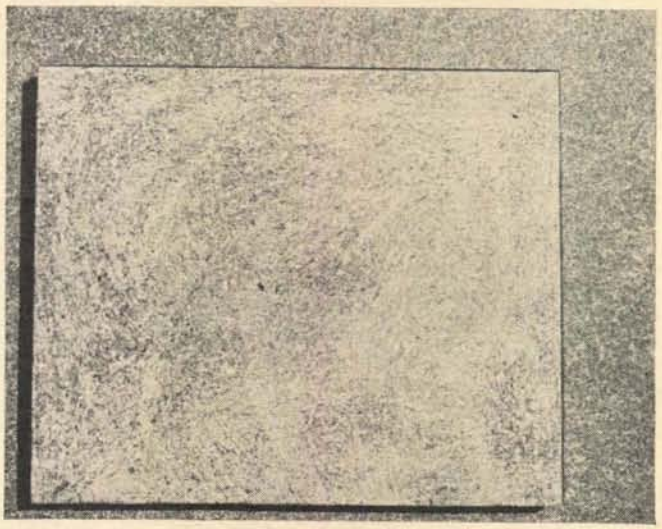
10. On vertical surfaces *Stardust* finish is produced by "spraying" it on. Use small atomizer for this; can be empty nasal-spray container as shown. Cut hole in bottom of container for spraying, use small cork to plug hole. Practice this finish first, as it can be tricky.

11. *Black 'n Gold* is a masculine finish, fine for a den or study. Start by brushing on application of flat-black enamel. Let set for about fifteen minutes, then wipe with cloth dampened in turpentine. Let dry, then wipe on heavy application of gold paint, wipe with turpentine.

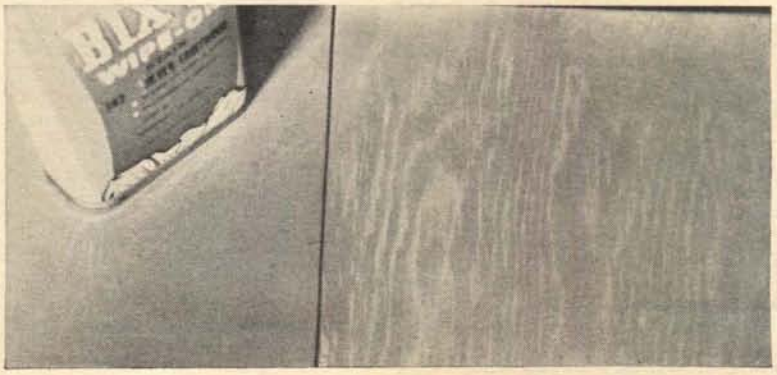
12. *Speckled* finish is a tough, durable surface that can be used on walls, furniture, cabinets and almost anywhere. It requires application of undercoater, sold at same paint stores that sells multi-color paint used.







13. One problem with staining of fir plywood is that due to aging and other conditions, some pieces are lighter or darker than others. Extensive sanding may help different-toned pieces to more closely match when stained.



14. Newly-introduced stain called "Bixit" is opaque enough to hide differences in tones of wood, still clear enough so that grain shows through. Stain is applied with cloth, can be applied as heavily as desired.

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# PIPE COVERINGS

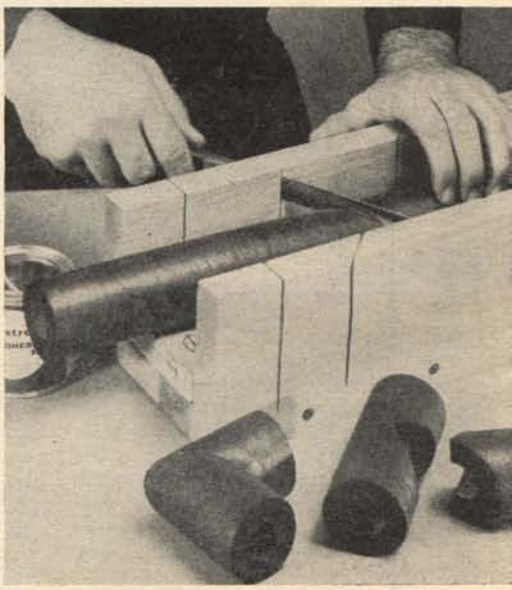
**ARTHUR S. GREEN**

*Photo courtesy Armstrong Cork Co.*

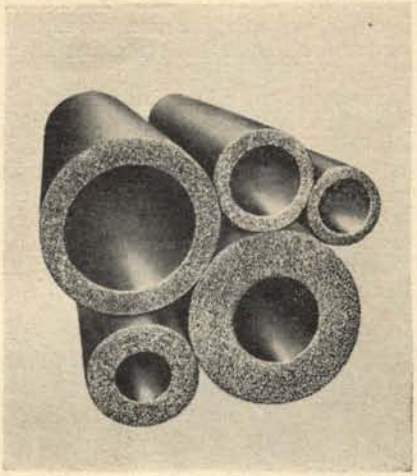
**1. Foamed plastic insulation is easy to install, fits neatly on pipe. Joints between sections and lengthwise slits are joined with brush-on adhesive.**

THERE ARE a number of practical reasons for covering, (insulating), pipes in the home. One is to keep in heat, as in the case of lines from a hot-water tank, the steam or hot-water lines from a heating plant, Fig. 4, and the ducts from a hot-air furnace, Fig. 6. Another reason for insulating pipes is to protect them from freezing when they are exposed to the weather. This situation occurs where water lines pass through an unheated crawl space, and where an outside faucet will be used during cold weather, Fig. 5. In this instance a method of warming the pipes also is necessary and a heating cable is first wrapped around the pipe, then it is covered with insulation and a weatherproof wrapping. Such heating cables can be obtained with a thermostat that turns on the heat only when the outside temperature drops to near the freezing mark.

Still another reason for covering pipes is to prevent "sweating". This problem occurs only with cold-water pipes, and generally is confined to basement areas. It also is pretty much a warm-weather phenomena, when warm, moist air contacts the cool pipes and moisture condenses



**2. Miter box and sharp knife permit cutting this insulation at any angle required for fitting against various pipe connectors and joints.**
*Photo courtesy Armstrong Cork Co.*

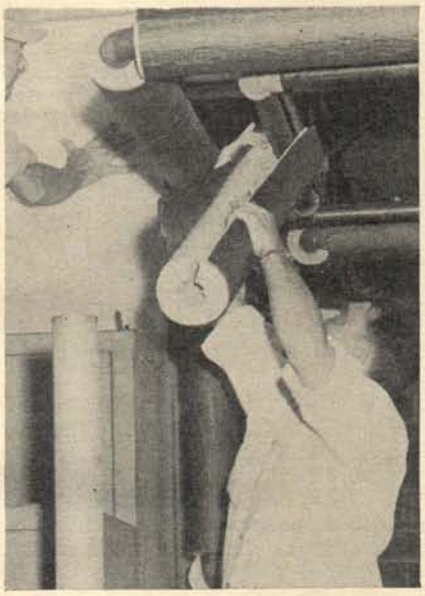


**3. Called closed-cell tubing insulation, this material is flexible, easily bent to fit odd angles and curves in pipes.**
*Photo courtesy Rubatex Div., Great American Ind.*

on the surface. In the winter most basements are heated and the relatively dry air does not contain enough moisture to cause trouble.

If your home does have a heated basement, there is little to be gained by insulating pipes for any reason other than to control "sweating". If you are remodeling your basement, this is a must, both to eliminate the annoyance of dripping moisture and to prevent moisture damage to ceiling material that is installed under the pipes.

There are various types of insulating pipe coverings. In Figs. 1, 2 and 3 are shown two kinds of



**4. This pipe insulation consists of fine glass fibers covered with vapor barrier that overlaps seam, held by bands.**
*Photo courtesy Gustin-Bacon Mfg. Co.*

**IN THE NEXT ISSUE . . .**

Spinning Wheel
Colonial Chest-Desk
Oscillating Drum Sander
Flexible Dryer Vent
Working With Sheet Metal

### Cutting Off Bolt

Before cutting a bolt, run a nut to a point below where the cut is to be made. After the cut is made, removing the nut will clean the threads.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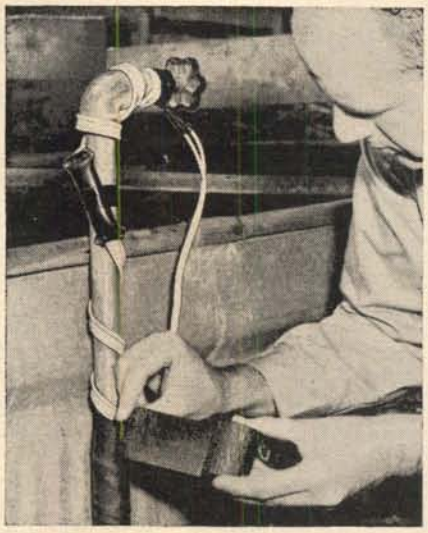


**5. Outdoor faucets that must be used in cold weather can be protected by heating cable wrapped around pipe.**
*Photo courtesy Easy-Heat, Inc.*

foamed-plastic materials that are available in various lengths and sizes. It is supplied in tube form, and must be slit lengthwise to permit fitting it on pipes already installed. The insulation is flexible and easily cut. Another form of pipe insulation, Fig. 4, consists of a blanket of glass fibers rolled into a tube. A vapor barrier around the tube has a flap that covers the lengthwise split in the tube. Tape or metal bands hold the insulating tubes on the pipe.

Lightweight fiberglass insulation also is used for heating and cooling ducts, Fig. 6. There sometimes is a chance of moisture condensing on ductwork that carries the cool air from an air-conditioning system, and the insulation, with its outer vapor barrier, prevents this from happening. △ △

**6. Heating ducts in attic or crawl space require insulation, such as this lightweight fiberglass material. Joints are taped.**
*Photo courtesy Sears-Roebuck Co.*

# Book Reviews

FIBER GLASS PROJECTS AND PROCEDURES
By Gerald L. Steel
McKnight & McKnight Publishing Co.
Bloomington, Ill., $4.00

Written as an introduction to the use of fiber glass by the beginning student and home craftsman, this book includes instructions for the fabrication of several practical articles. Details are given for making molds and fabricating such items as simple trays and lamp shades, up to a full-size chair. An excellent book for the home craftsman interested in this fairly new and versatile construction material.

BIRD CARVING
By Wendell Gilley
D. Van Nostrand Co., Inc.
120 Alexander St., Princeton, N. J.
128 pages, illus., $5.95

Clearly explained and diagrammed in this book are the methods to use in carving various species of birds; how to use both hand and power tools in carving, as well as vises for holding figures to be carved. Also included are the kinds of paints and brushes to be used. The author of this book originally was a plumber, started bird carving as a hobby, now does it as a full-time profession.

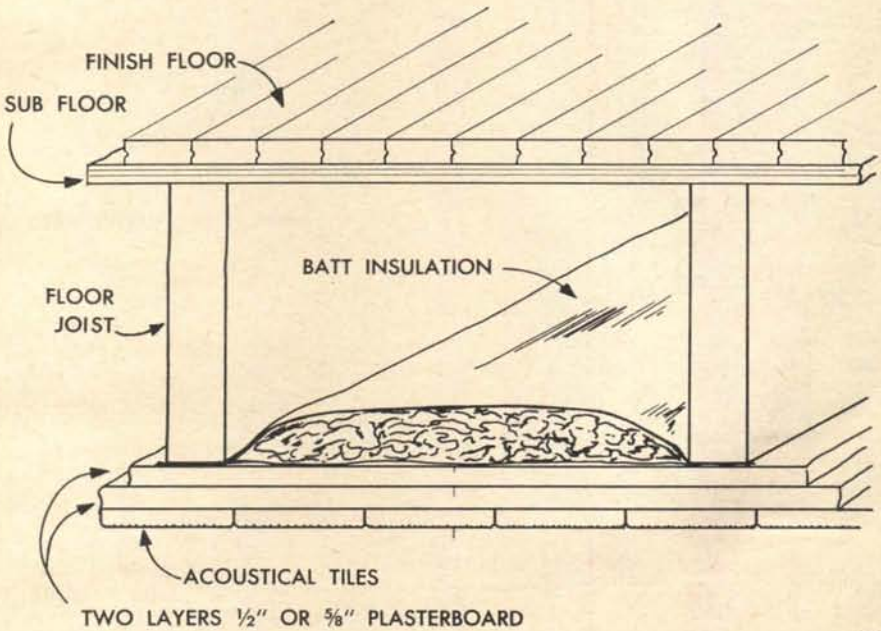
EARLY AMERICAN DECORATIVE PATTERNS
By Ellen S. Sabine
D. Van Nostrand Co., Inc.,
Publishers, Princeton, N. J.; $7.95

Written for lovers of Early-American decorative art, this book contains 60 drawings and 28 photos, some in full color, describing in detail how to duplicate the painted decorations used on furniture and walls in the homes of our ancestors. Some of the illustrations are full size. Included are instructions in making foil pictures, how to restore decorations on antique furniture. The book is fascinating reading, as well as being instructive.

*Photo courtesy Armstrong Cork Co.*

# Basement Soundproofing

OF THE TWO KINDS of "sound conditioning" required in a home—the control of sounds within a room, and the prevention of sound passing from one room to another—a home-shop owner is more concerned with the second. While the application of acoustical tile to the ceiling of a room will suppress much of the sound within the room, it will not prevent noise in the room from passing to a room adjacent, or above or below. Sound is energy, and an energy-absorbing mass must be used to keep sound from passing from one room to another. Your basement workshop and basement recreation room present similar problems in sound control. The high-pitched howl of saws, routers and drill motors is matched by the laughter of party guests and the sounds of music from radios and record players. To keep the sounds within their own rooms, and keep them suppressed within those rooms in the basement it is necessary to nail two layers of ½ or ⅝-in. plasterboard to the floor joists to provide an energy-absorbing mass, then apply acoustical tile to suppress noise within the room. Batt insulation can be installed between the joists for further sound suppression, but this usually will not be necessary. △ △



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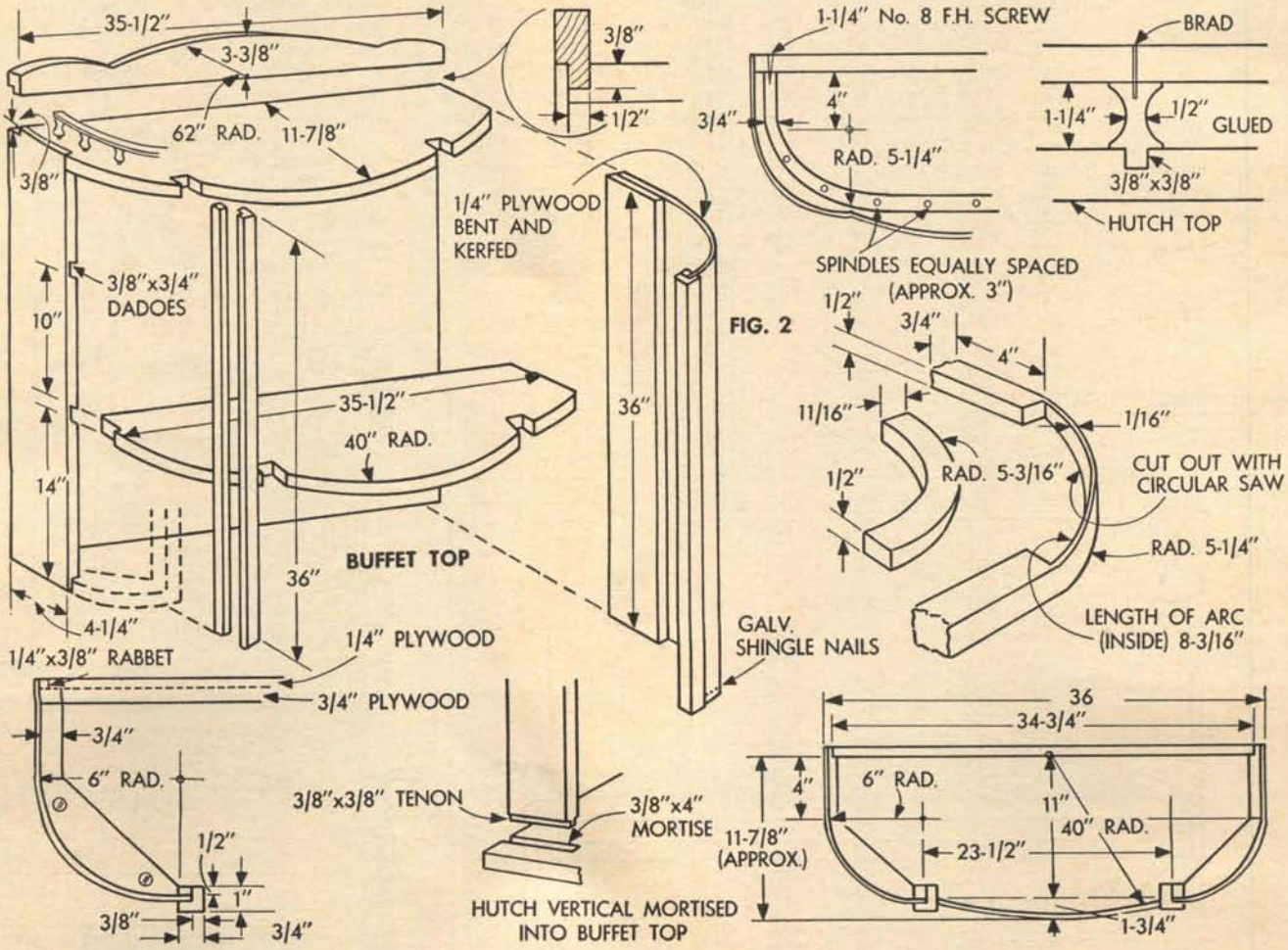
# Hutch-Top Buffet

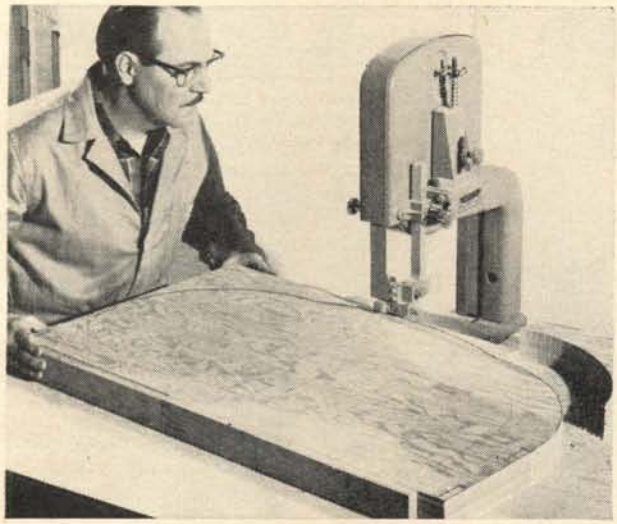
MANLY BANISTER

1. Multi-purpose cabinet can be used to display china, store linens, or as knick-knack shelf, storage cabinet.

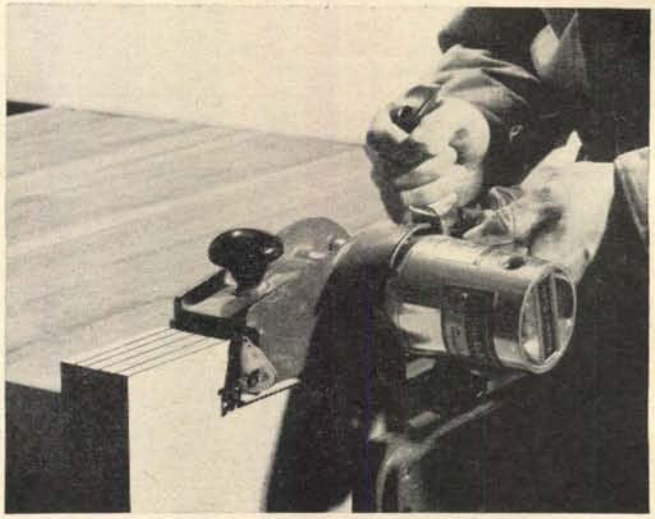
THIS PIECE OF FURNITURE is unique in that the design could be considered contemporary, yet might easily be period. It can be used as a sideboard, a buffet or as a storage and display cabinet for any of a number of items, Fig. 1. From a construction standpoint the item is a challenge to the craftsman, as it incorporates five different methods of bending wood to shape.

To start construction, first carefully study the drawings and photographs. The unit is in two parts, the hutch top and buffet bottom. Shelves for each section are stacked and cut at one time, Fig. 3. After cutting the two groups, plane them if necessary, so that all are the same length and shape, Fig. 4. The shelves are birch-faced ¾-in. plywood. Make the base first, Figs. 5, 7 and 9. Cut the vertical pieces to length, cut the necessary rabbets and dadoes and assemble the framework of the buffet, Fig. 7, including the ¼-in.-plywood back. Assemble the drawer-guide unit, Figs. 5 and 9, and install it in the buffet framework, Fig. 7. Note that veneer tape is applied to the two inner edges of the front vertical members before they are installed. The curved base of the buffet requires a piece of clear, straight-grained stock or plywood. Cut it to length, then mark the straight and curved sections. Make a saw kerf to within ⅛ in. of the face of the stock, at the beginning of the curve, then clamp the stock to a flat surface, Fig. 6. Raise the other end





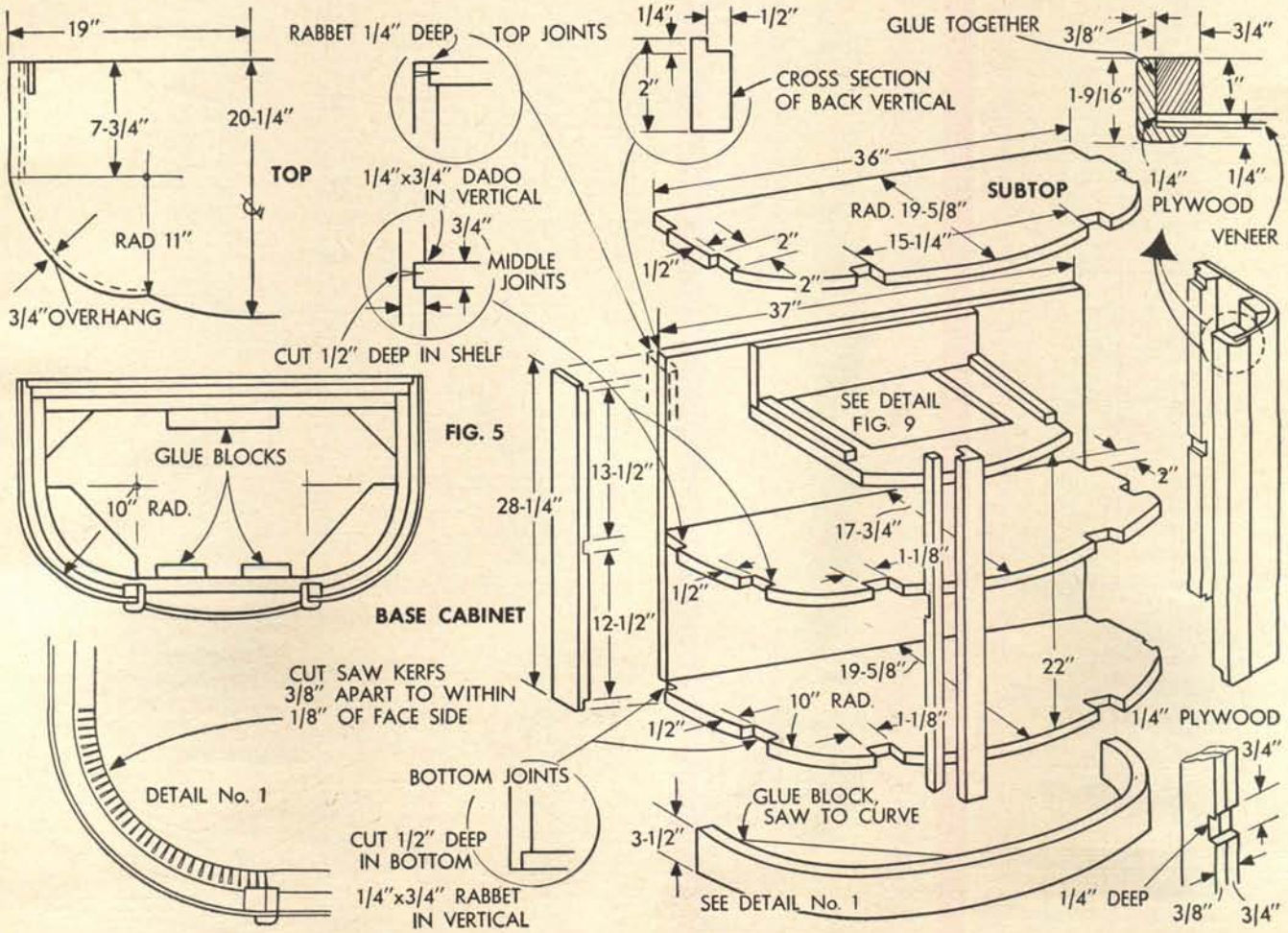
**3. Bandsaw each group of shelves as a unit; shown are buffet shelves. Note scrap boards tacked to back. Auxiliary table on saw may be required.**



**4. Make sure all shelves in each group are the same shape and size. After cutting with bandsaw, true up with a plane if that is necessary.**

of the board until the kerf almost closes, then measure the distance from the bench top to the stock. This is the spacing between kerfs. Cut and bend the base, wipe glue in the kerfs, then install it with curved blocks cut from 4 x 4s as in Figs. 5 and 10. Sand the board to remove irregularities, Fig. 10. Note that the back ends of the base are attached to a "tie strip" with glue and countersunk screws.

Next, assemble the framework of the hutch top, Fig. 2, and nail on the back. Make the decorative rail on the hutch top with the aid of a "face bend". In this bend the stock is cut away to leave a thin facing about 1/16 in. thick. The facing strip then is bent around, and glued to, a curved member bandsawed to shape, Figs. 2 and 11. Lathe-turn the spindles for the rail from ¾-in. dowel stock and attach the rail to



the hutch top. Lay the hutch on its back and measure for the curved sides. Make the panels slightly longer than would seem necessary, as kerfing and bending the ¼-in. fir plywood will reduce the actual length. Make the first kerf ½ in. from the edge of the panel, using a thin plywood blade. Make the kerf just deep enough to cut exactly halfway through the center ply of the stock. Now, cut a kerf every ¼ in. The stock must be held flat on a table saw so the depths of the kerfs do not vary. **Use a push stick!**

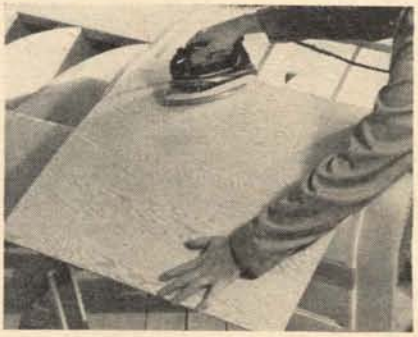
**6. To measure for kerf spacing, make kerf near end of board, clamp as shown, lift until kerf almost closes, measure height of lift.**

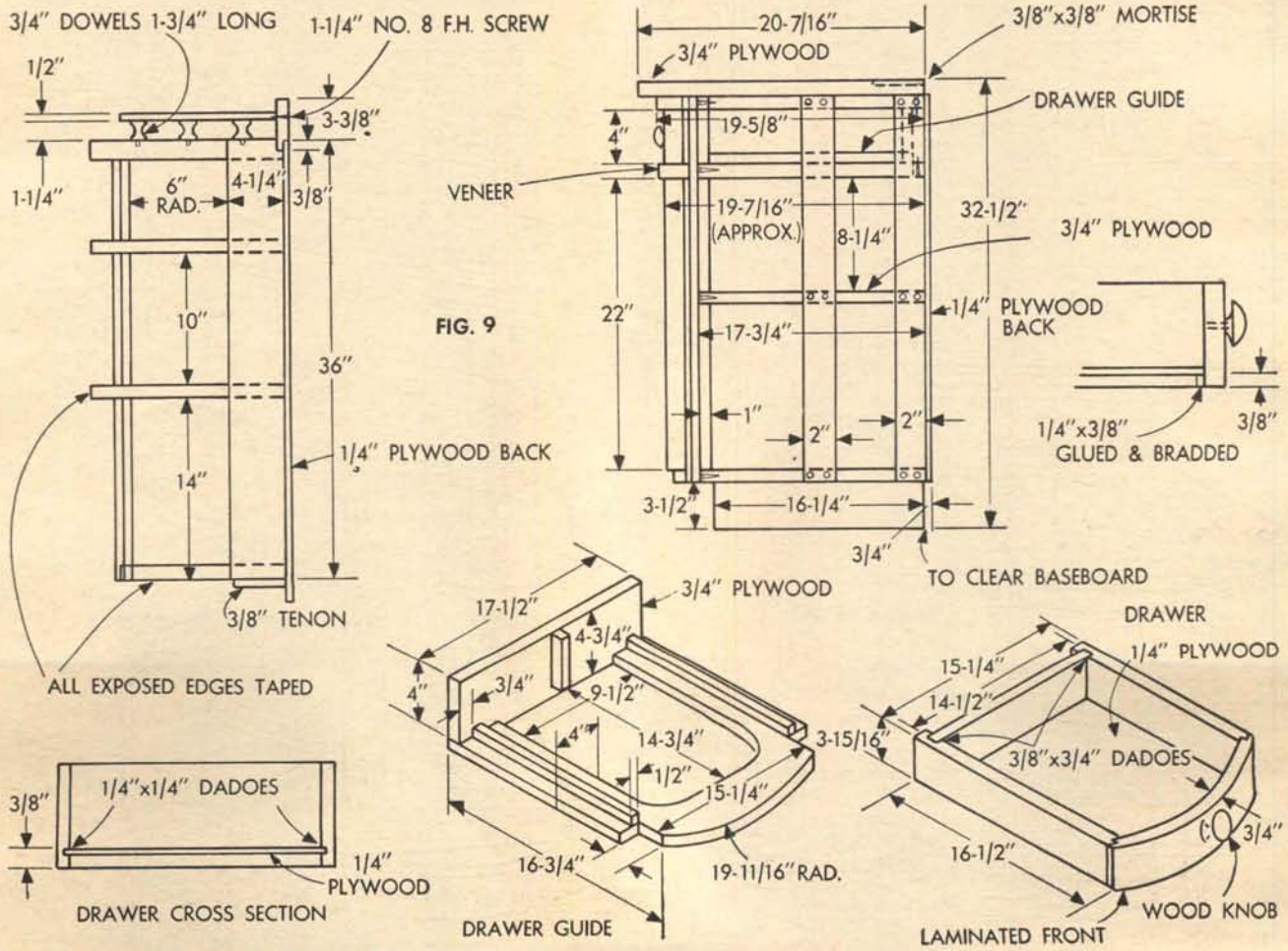
**7. Buffet framework here is upside down, curved block cut from 4 x 4 is clamped in place to hold curve of base. Note various glue blocks.**

Apply glue to the shelf edges, vertical members and to the back of the panel. Start at the front and work to the back. Use galvanized shingle nails, spaced 1 in. apart. Heat a section of the panel with an iron, Fig. 8, bend it as the heating allows, then nail it. Now, attach the hutch top to the buffet bottom, after fitting the top to the buffet. The buffet top is the same shape as the buffet shelves, but is slightly larger. The radius for the center curve is 20¾ in., for the side curves is 11 in. Use 1¼-in. No. 8 flathead screws and glue to attach the hutch to the buffet. Attach the plywood panels to the buffet, Fig. 7, using the iron. The greater radius of the buffet eliminates the need for kerfing the plywood here.

You now are ready for veneering. Cut the veneer sheets to size, join them and tape together. Apply contact adhesive according to directions on the container to both the veneer sheets and the curved

**8. Heat plywood panel with iron to bend it around curves. Heat section at a time, as it bends naturally, set iron down, nail that section.**

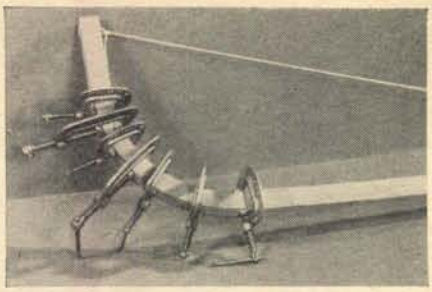




panels of the hutch and buffet, then apply. If bubbles appear in the veneer, later on, set the iron between "rayon" and "wool" and hold it over the bubble for a few moments, applying pressure. The heat reactivates the adhesive and smooths the wood. The veneer on the original was cherry; can be any hardwood.

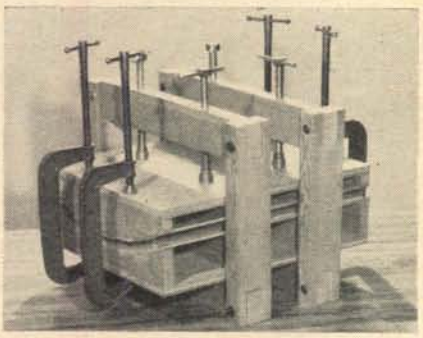
The final wood-bending exercise is called laminating, an item being made up of thin sheets glued together. The door and the drawer front of the buffet are this laminated construction. A press is necessary for this job, Figs. 12 and 13. If you have access to a metal-turning lathe, the clamp screws are made up easily. They also can be purchased from a number of WORKBENCH advertisers. The clamps alone, or clamps and frame can be purchased. The form in which the laminations are clamped must be made up as indicated. The grain of all sheets in laminated construction runs parallel. Glue is brushed on both faces of the inside laminations —6 laminations are used—and they are placed on several sheets of wrapping paper placed over a sheet of do-it-yourself aluminum. Paper and aluminum are placed on top and the press is clamped down. A couple of C-clamps are used at each end of the press. Note that a brad is driven at the center line of the stack of laminations near each end **before** the stack is placed in your veneer press. Make the door, then the drawer front, allow the glue to set at least 24 hrs., then remove the items from the press. Trim and fit them to the openings in the buffet. Semi-concealed hinges are bent to fit the door, and recessed as indicated in Fig. 13 so they will operate with the curved door and curved sides of the buffet.

Tape all exposed edge grain of the plywood members, then sand all surfaces carefully. △ △



**11. Curved member is fitted in notched strip that has been cut to receive it for making rail that fits on hutch top.**

**10. Face of kerfed stock will show small flats between kerfs; sand face of stock to remove slight ridges.**



**12. Laminated door is clamped in form, allowed to set until glue has dried completely. Note clamps on ends.**

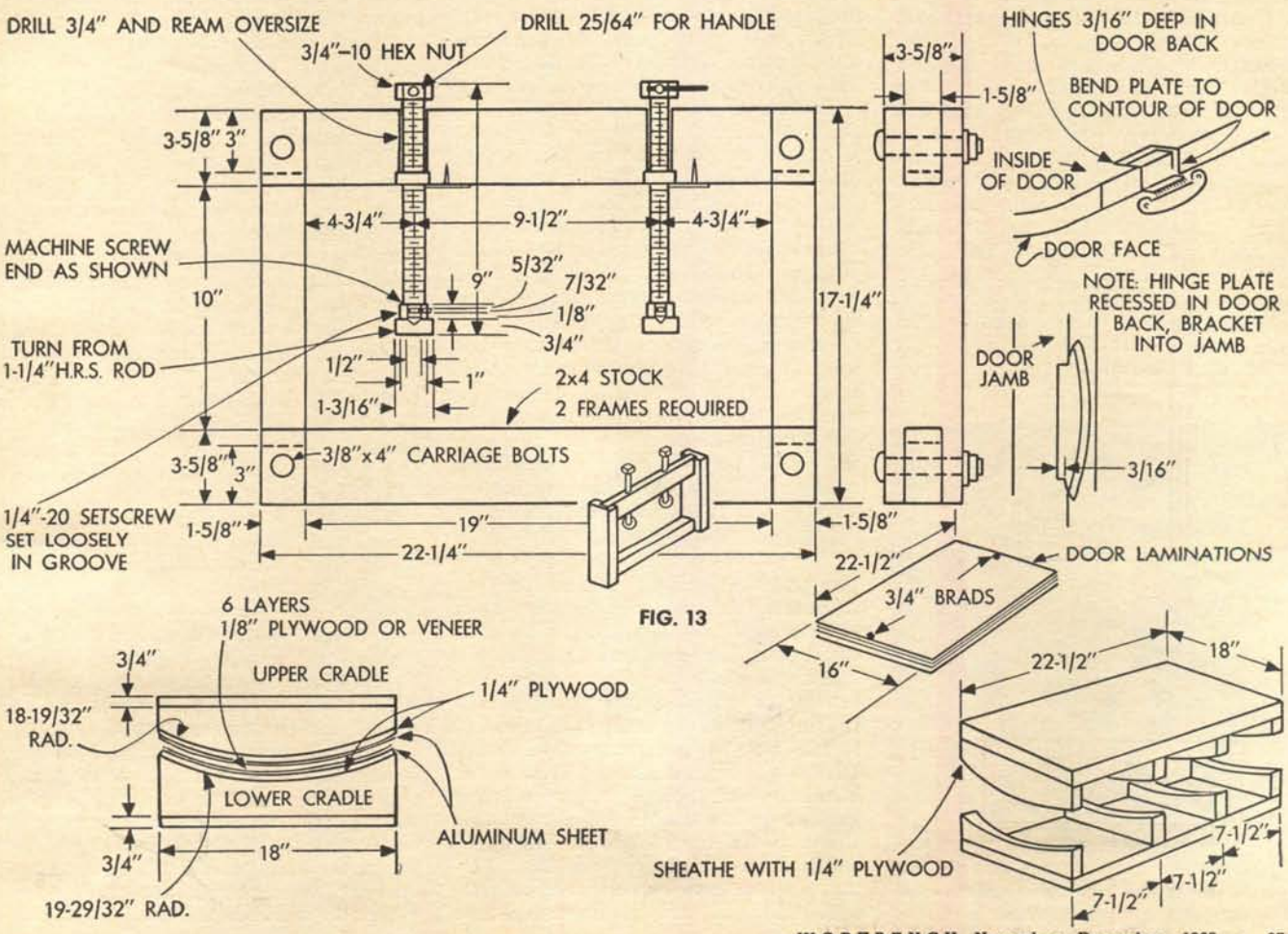
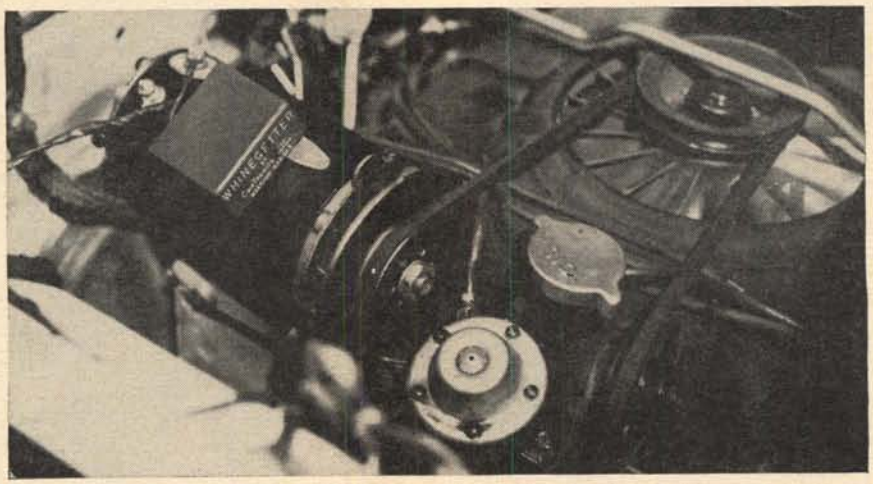



FIG. 13

# Noise Suppression For CB

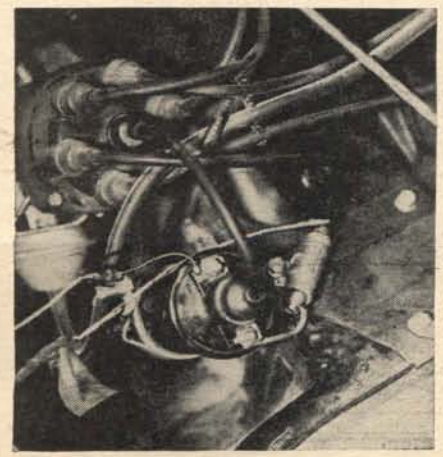



**1. Generator on the engine of this Corvair has been quieted with unit designed specifically to eliminate whine produced in this component.**

WHEN YOU INSTALL any CB transceiver in a truck or car there is going to be at least some interference from the electrical and ignition systems that must be suppressed for optimum performance.

There are several basic rules in all suppression operations: First, the offending noise must be stopped at the source of generation; if it is allowed to radiate into the air it is almost impossible to suppress. Second, all connections must be mechanically and electrically tight. This may require that some connections be soldered. Third, all leads must be kept as short as possible; any excess length may become a transmitting antenna for noise.

Following are the symptoms and suggested cures for the types of noises most commonly encountered in a mobile installation.



**2. To silence ignition coil, coaxial capacitor is placed in series with lead that runs to ignition switch.**

Generator Noise: This noise is a whining sound in the transceiver, the pitch being dependent on engine speed. To check for generator noise turn on your headlights to bright and race the engine, then turn off the ignition switch. The offending whine will be present until the engine ceases rotating. (Make sure that your transceiver is not in the ignition-switch circuit so that it shuts off with the switch.) There are several methods used for generator-noise suppression. The tuned-type filters employing a coil in series with the armature are good, another method is to use a .5 mfd. coaxial capacitor (Sprague #48P18) in series with the armature lead on the generator. One of the best generator-noise suppressors we have tested is the "Whinegetter" made by ComTronics, Shawnee-Mission, Kans., Fig. 1. When any of these suppression methods are used, the lead between the armature connection and the filter must be very short, filter mounted securely.

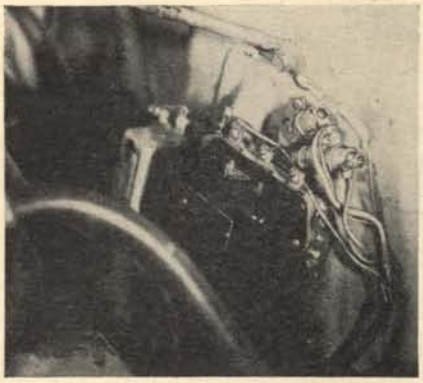
Ignition Noise: This will be a series of sharp "popping" noises in the transceiver. To check for this interference, race the engine, shut off the switch. Ignition noise will disappear the moment the ignition switch is shut off. There are several potential noise-producing points in the ignition systems, and each must be worked on separately. First, all high-tension wires must be clean and free of grease, oil and cracks or breaks. If the car is over three years old, the best bet is to replace all spark plug and coil wiring with new, non-resistor-type wiring. This is not a hard-and-fast rule, however, as even new cars may have bad plug wires. Spark plug and coil wires should have all connectors soldered securely to the wire. (This normally is not done.) Spark plugs should be cleaned and regapped to manufacturer's specifications, and the outsides should be cleaned. If possible, replace the plugs with resistor type, preferably Auto-Lite. Resistor wiring is **not** recommended with resistor plugs, as a decrease in engine efficiency may result. The coil should be clean and securely grounded. Remove the wire from the coil that goes to the ignition switch and install a .1 mfd. coaxial capacitor, (Sprague #80P3) in series with this lead, Fig. 2. Ground the capacitor mounting bracket beneath a bolt or screw as near to the coil as possible. The distributor cap and body should be cleaned, the distributor points and condenser replaced and the points properly gapped.

Voltage Regulator Noise:

This sound usually is a random "burping" sound that occurs at fairly low engine speeds. Install a .1 mfd. coaxial capacitor (Sprague #80P3), in series with both the generator and battery leads at the regulator. Install a 10-ohm, 1-watt composition resistor, in series with a .001 mfd. ceramic capacitor from the field terminal to ground, Fig. 3.

Wheel Noise: "Crackling" sound produced when static electricity generated by tires discharges through the thin film of grease between the front-wheel bearings and the axle. Eliminate with grounding springs inside the grease caps.

Small electric motors used for

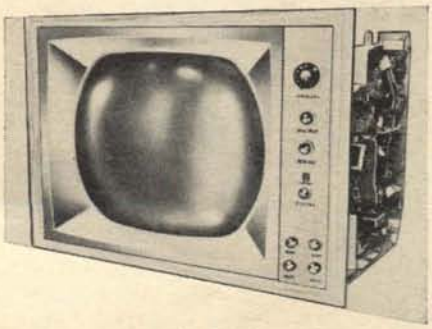


**3. Coaxial capacitor is fitted to generator and battery leads, capacitor and resistor to field terminal on regulator.**

the heater, windshield wipers, etc., may create a "whine" that can be suppressed by installing a .001 mfd. disk ceramic capacitor from the "hot" lead to ground. Electrically-operated oil and gasoline gauges may cause random scratching noises that can be suppressed with the .001 mfd. capacitor from the sender-unit wire to ground.

If there is still noise: ground the engine block to the frame in several places with heavy, braided cable. Ground the hood to the body near the hinges. Ground the tailpipe, muffler and exhaust pipe to the frame. This latter assembly can be around 100 in. long, close to the 102-in. length of a CB antenna and can really give trouble. In most cases, not all the corrective suppression methods suggested will be necessary. When you have reduced interference to an acceptable level, the suppression job is complete.△△

# Kit-Assembled COLOR TV



NOW AVAILABLE in kit form is a 21-in. color television, that can be assembled without previous electronic experience. Kit is $419.00 without speaker, remote control system is optional at $60.00. Kit is in 7 packages that can be purchased separately, so you can "pay as you wire." Transvision Electronics, Grey Oaks Ave., Yonkers, N. Y.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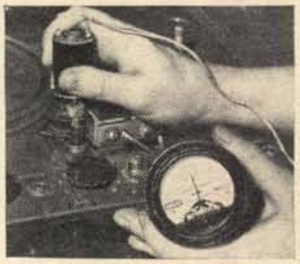

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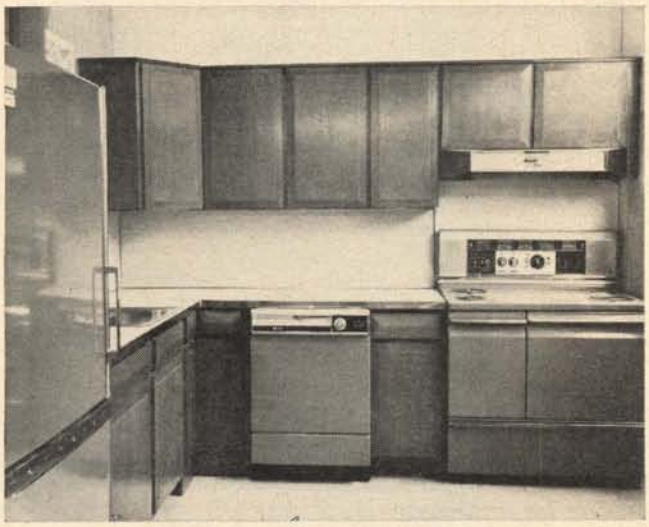
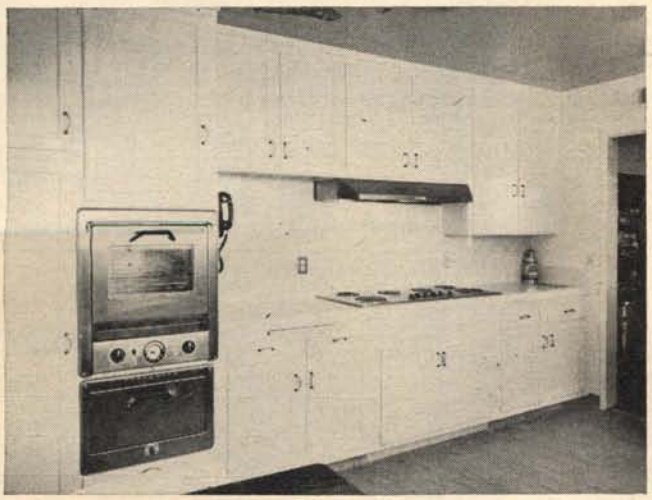
# Building Kitchen Cabinets

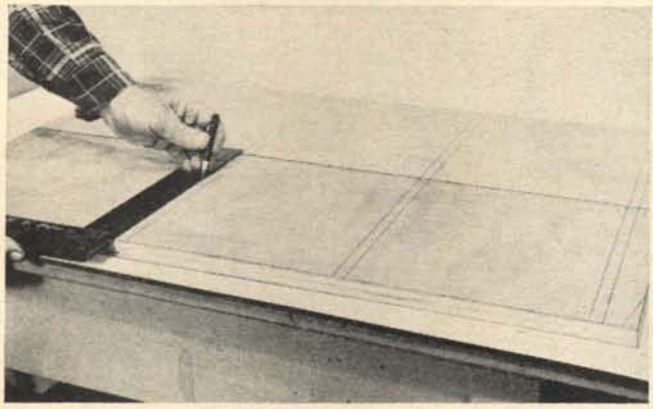
## PART VIII

RALPH TREVES

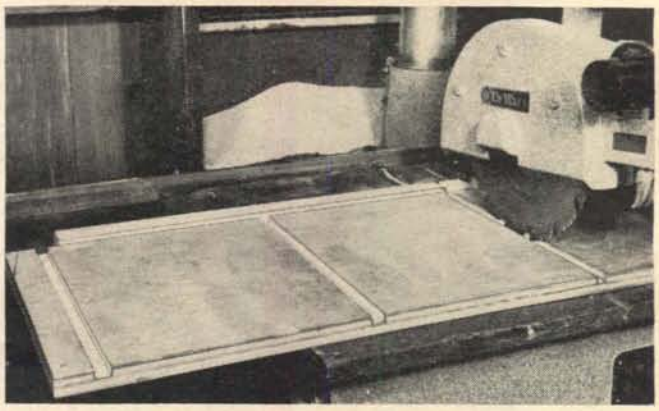


Great variety in sizes, shapes and styles of wall-hung kitchen cabinets is illustrated by photos of kitchens on this page. All doors have overlapping lip all around, differences in styling are provided by choice of wood, application of trim, kind of finish that is applied. Note that heights of various wall-hung cabinets varies according to location; those over range and for pass-throughs are quite high, those over *regular* counter are lower. In all cases there is a soffit, or a shelf, over the cabinets, as it is impossible to reach that high from the floor without the use of a ladder or stool. In some cases, cabinets for "dead storage" are used.





1. First step is to mark off locations of dadoes for shelves on inner faces of side members. Lower shelf is above facing.



2. If radial-arm saw is used, cut along marked lines first, then shift stock slightly between passes with saw.

## Wall-Hung Cabinets

AFTER MAKING THE RELATIVELY large and heavy base cabinets for your kitchen you will find the building of wall-hung units a pleasant change of pace. These units are much smaller, lighter and construction involves almost no complications.

While all the kitchen cabinets must be of the same style and finish, there is considerable variation in the sizes. Those above the sink and countertop should be high enough to allow plenty of working clearance and headroom, while a cabinet above a range must allow sufficient space to eliminate any fire hazard.

While it would seem preferable to build cabinets as high as possible to provide maximum storage, even if some of the space required the use of a ladder, appearance is important and decorators favor the low-level line. Cabinet heights are kept fairly low even in rooms with high ceilings, a soffit being used above the cabinets.

As a rule-of-thumb, the space between various base units and the wall-hung cabinets are as follows:

Over work counter, leave 15 in. when cabinets are about 12 in. deep, 20 in. with cabinets up to 18 in. deep.

Over a countertop range, leave 28 in. to allow for hood and blower.

Over the sink, allow 30 in.

Make cabinets a maximum of 36 in. wide; this is fine for double doors, keeps shelves short enough

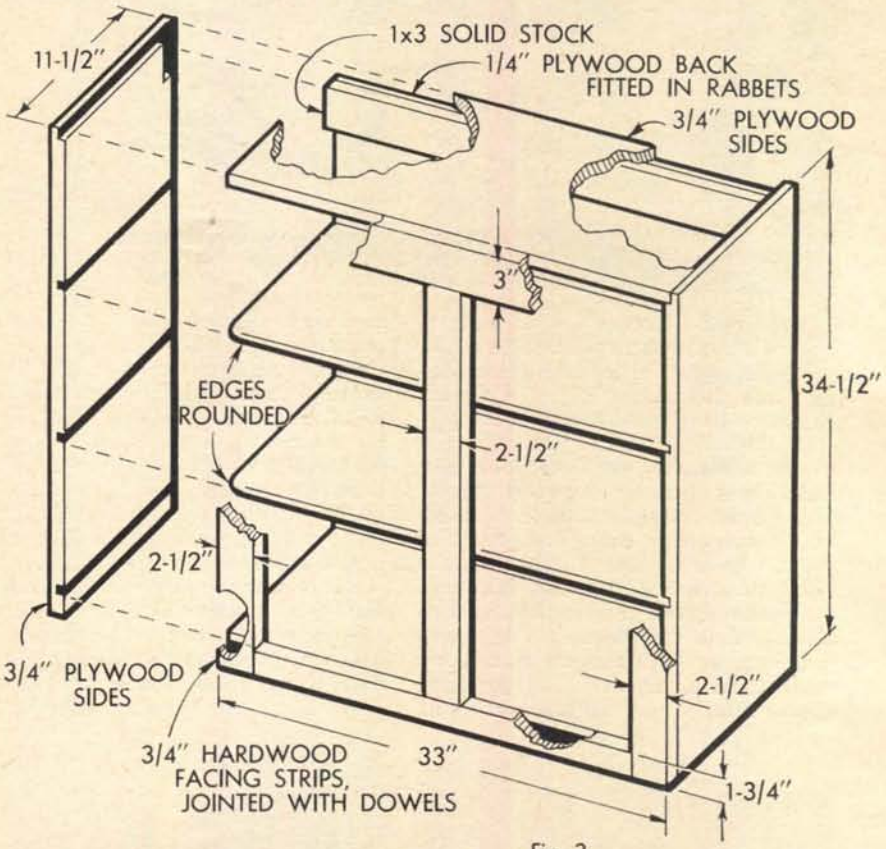
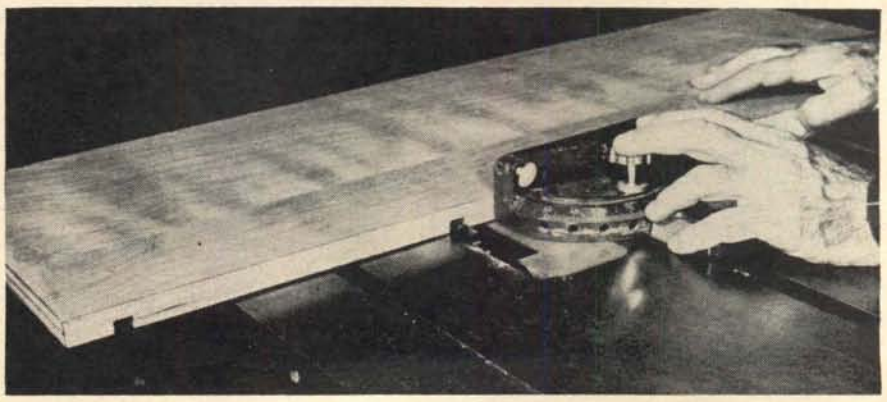
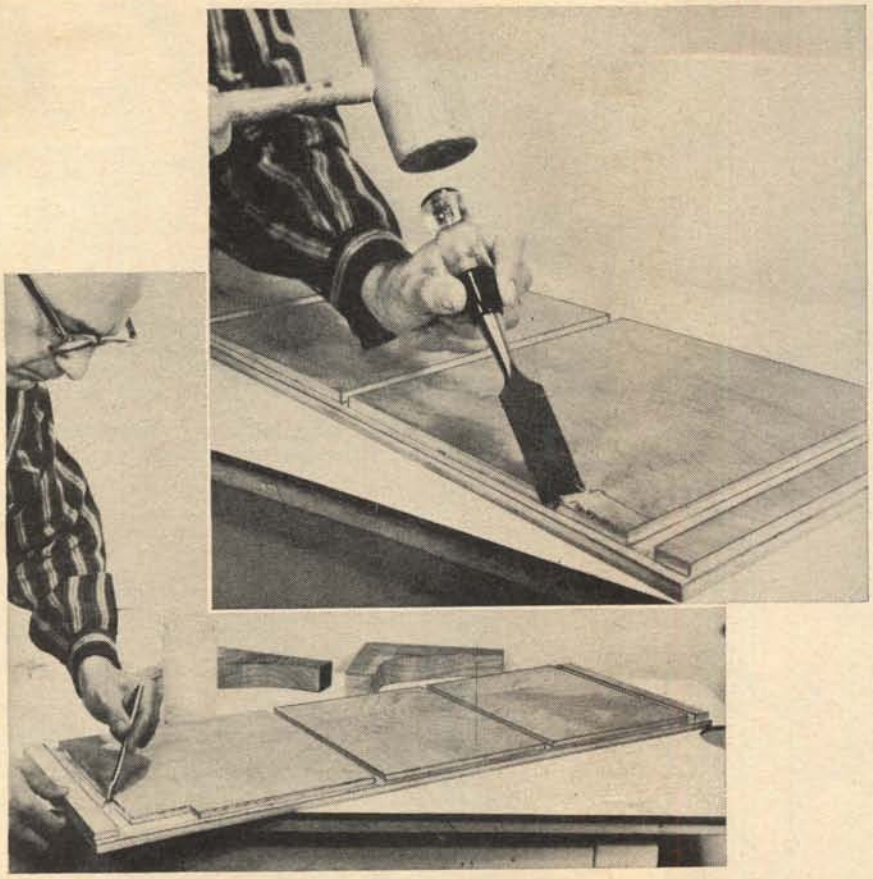


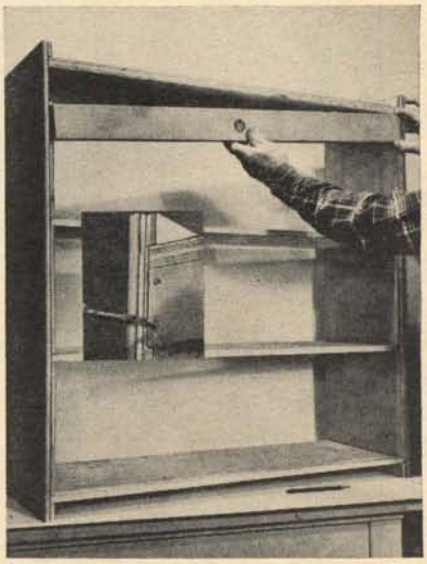

Fig. 3



4. Table saw also can be used to make dadoes for shelves. Note that shelves are ½-in. thick, while cabinet top is cut from ¾-in. plywood.



5. At top rear, under groove for top board, mortise ¾ x 3 in. is cut for cross rail that is used as hanging bar.



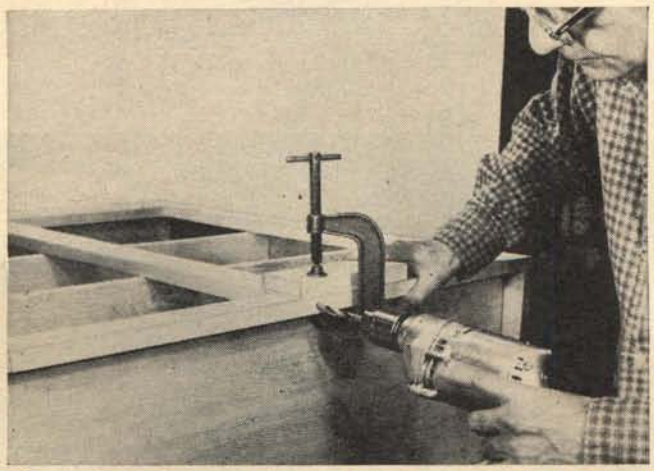
6. Rail is attached with glue and screws to sides, screws and nails from top board down into rail.

so they won't buckle under weight.

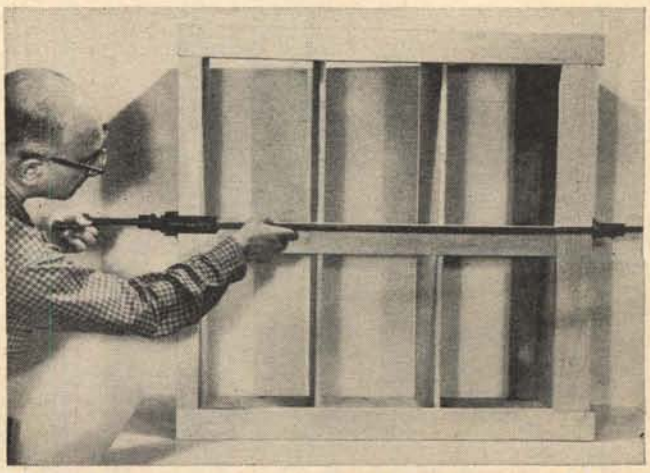
Whether a cabinet is 12, 24 or 36 in. high, general construction details are the same, Fig. 3. Cabinet sides are hardwood-faced ¾-in. plywood, "good one side." If the sides of the cabinets are exposed, you may want to use plywood "good both sides" for appearance. Shelves are ½-in. clear pine, the back is ¼-in. plywood, the cabinet top is ¾-in. plywood, the cross brace is 1-in. solid stock, (approx. ¾ in. finished), and the front facings are ¾-in. milled - thickness hardwood solid stock. Doors are ¾-in. plywood with a bullnose lip all around. (This can be varied to suit, as regards material and finish.)

First step is to cut the side pieces, making them ½ in. shorter than the desired height to allow "leveling" clearance at the top. Mark the shelf locations, Fig. 1, keeping in mind that the bottom shelf must have its upper surface flush with the upper edge of the trim strip. The shelf dadoes are cut, Figs. 2 and 4, as well as the rabbets all around for the ¼-in. plywood back. A mortise then is cut for the cross brace, and glue is generously applied, Fig. 5. The shelves and sides are assembled, then the cross brace is attached to the sides and to the top, Fig. 6. The facing-trim pieces are nailed to the cabinet, then are edge-drilled for dowels, Fig. 7, for added strength. The assembly then is clamped, Fig. 8, and the glue allowed to set. It is a good idea to install the back at this time to help keep the cabinet square. Make and fit the doors now, (their construction was described in a previous article), then remove them to permit easier hanging of the cabinet.

Mark the locations of wall studs and soffit framing and drill clearance holes through the plaster, Fig. 9. A helper will make hanging the



7. Facing strips are clamped together with block to keep them flush, then are edge-drilled to permit inserting dowels.

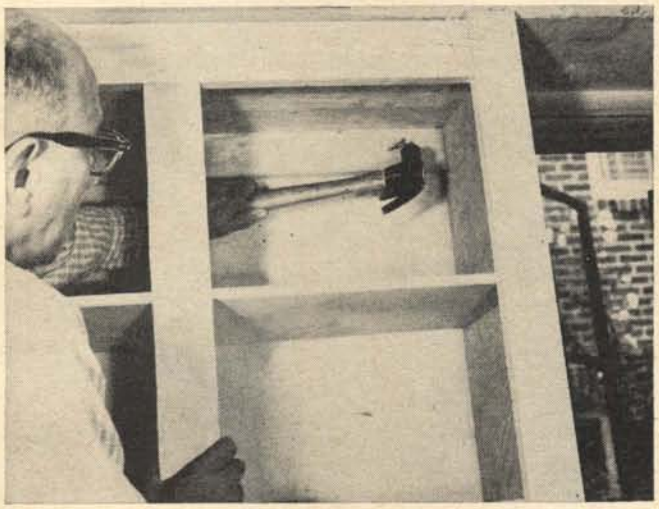


8. Bar clamps are used to draw side members of facing against top and bottom, top and bottom against center.

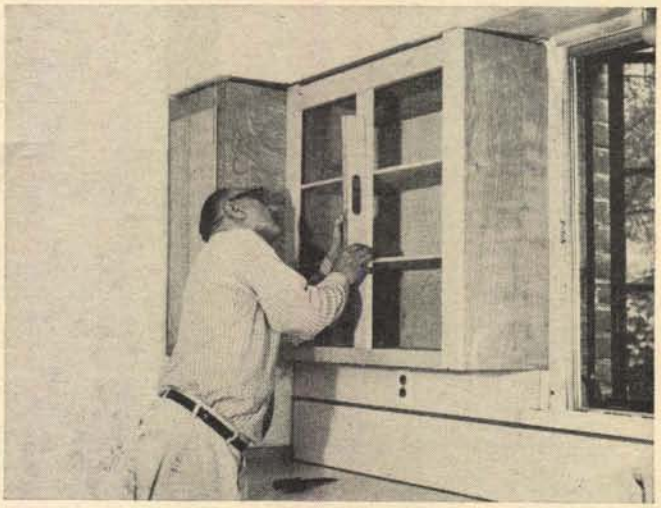
cabinets easier, but with the aid of a brace to hold the cabinet in position, one man can do the job. Lift the cabinet in place, Fig. 10, then drive a nail through the cross brace into a stud, Fig. 11, to hold the cabinet while you install the other screws and nails. After installing a few nails and screws, plumb and true the cabinet by fitting wedges and shims above or behind it, Fig. 12. Fit and install trim along the tops of the cabinets, Fig. 13. In some cases it may be necessary to use a quarter-round or small cove between the wall and the back edge of the cabinet to conceal a space. In Fig. 14 the cabinet is installed and ready for the doors. A single piece of trim is run the full length of the row of cabinets, and over the space above the sink. A scalloped member may be installed behind the trim above the sink. △ △

**9. Before installing cabinets, locate wall studs, framing of soffit. Drill holes through plaster for clearance holes.**

**10. One man can hang cabinets, if he uses wood brace to prop cabinet in place while he attaches it with screws.**

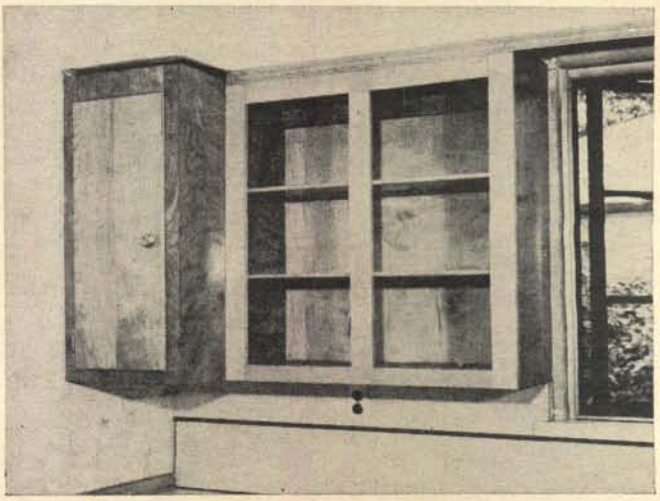


**11. Nail driven through cross rail into stud will hold cabinet while screws and other fastenings are installed.**

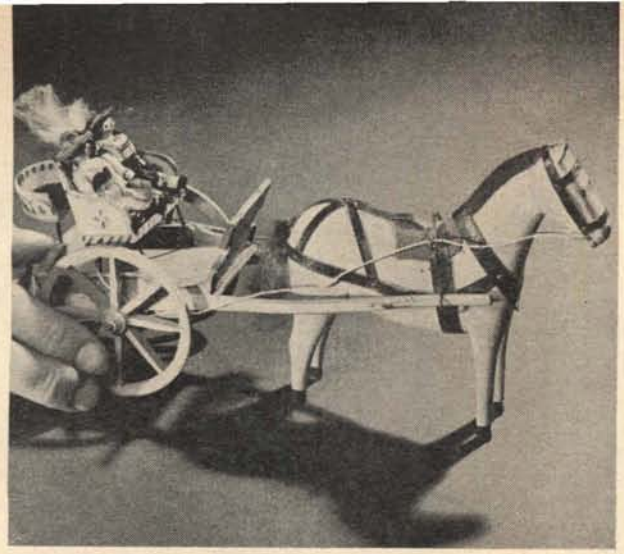


**12. Use shims at top or behind cabinet to adjust it plumb and level. Note space at top that permits adjustment.**

**13. Top edges of all cabinets are fitted with trim that runs completely across room. This closes space at top, gives installations "finished" look.**



**14. Note that trim also runs across open space above sink. Trim will be fitted above end cabinet, then doors, removed for installing, are replaced.**



Original horse and cart came from Norway. Our design varies from original to simplify construction.

# HORSE and CART from NORWAY

**HI SIBLEY**

HARD MAPLE was used for the original horse in this set that came from Norway, but the amateur will find white pine easier to carve. First, rough the horse to shape with a jig saw, then drill between the legs as indicated and saw on the dotted lines. Use a sharp knife to shape it more completely, then use rough sandpaper, followed with finer grits to finish. Paint the body of the horse tan, the mane brown, then glue on harness of thin black plastic. Drive in staples for rein guides and for the shafts, as indicated. Slot the mouth with a saw to receive the reins.

Make the cart from ⅛-in. maple stock, except for the seat backs that are 1/16-in. balsa. The shafts of the cart are spruce, steamed and bent in a form made by driving nails into a board, then allowed to dry and set. Wheels are hardwood disks turned on a lathe. Turn the hubs as part of the two disks, then saw out the spokes. The latter job is a little delicate and calls for patience. Leave the complete cart the natural wood color, and either carve the decorations or make with a burning pencil. △ △

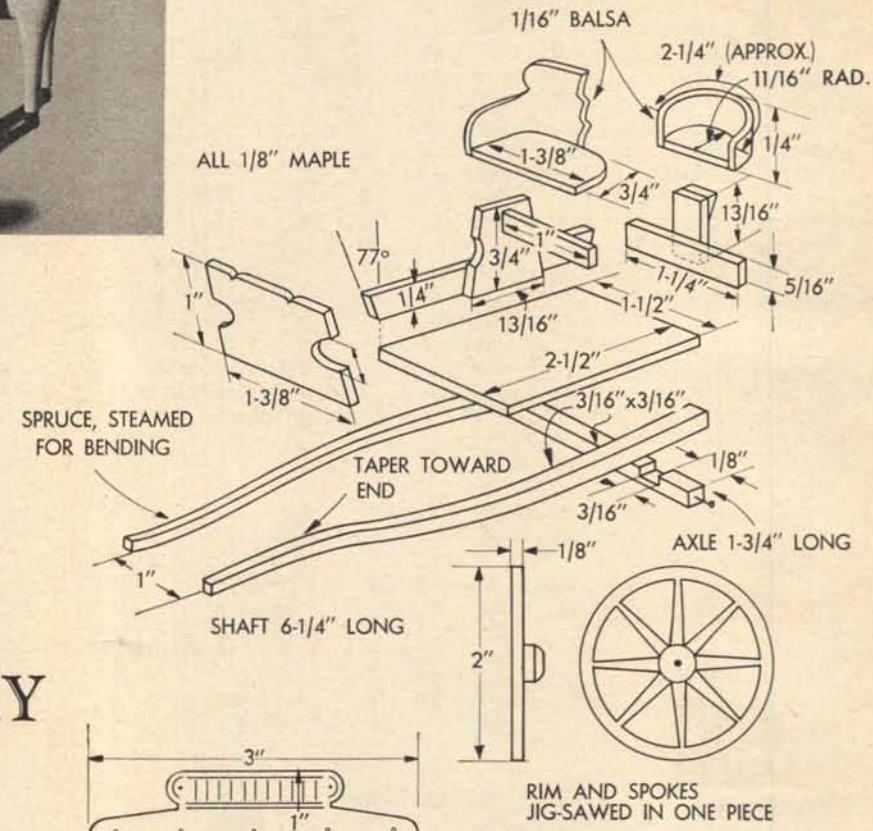



FIG. 1

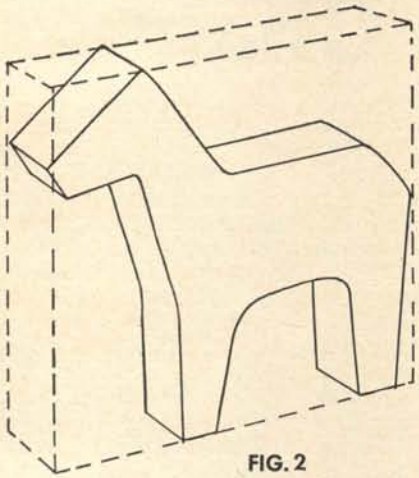


FIG. 2

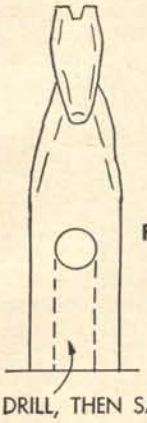


FIG. 3

HOOF DETAIL

DRILL, THEN SAW ON DOTTED LINES

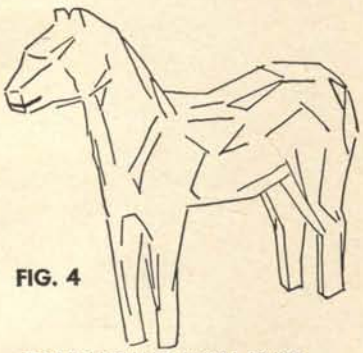
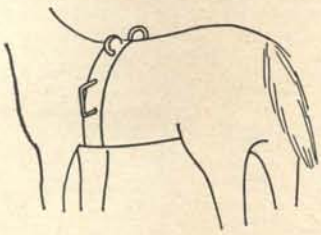


FIG. 4

ROUGH-SHAPE WITH KNIFE, FINISH WITH SANDPAPER



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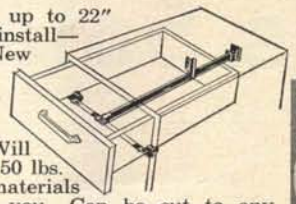

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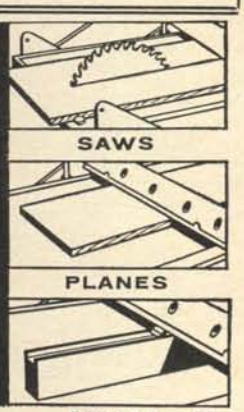
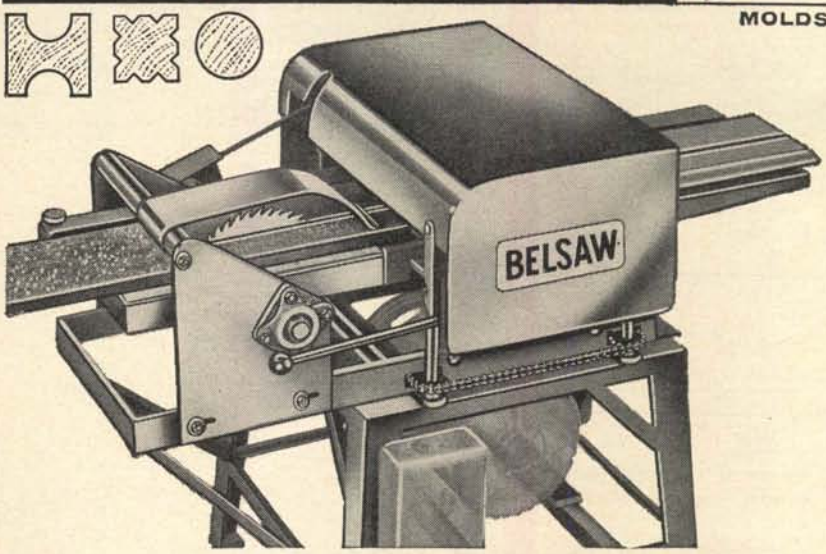


SAWS

PLANES

MOLDS



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JIM COOK

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OF ALL THE PROJECTS that Dad can make in his workshop, few will give his youngsters more genuine pleasure than a sofa and chair that are scaled down to their size. Basic construction, Fig. 1, is quite simple, the frames consisting of 1½ x 2 lumber. The legs are attached last, after all upholstering is done. They are made ¼ in. longer than required, then clamped in place and marked as indicated so they can be cut to fit flat against the floor. Furniture glides can be attached to them after they are nailed in place. In Fig. 2 is shown the framework for the chair. Note that the arm is upside down, the wide side actually being on top when the arm is attached to the chair frame. The angle of the arm is parallel to the angle of the back.

Canvas webbing is tacked to the back of the chair and sofa frame, as in Fig. 2; the only difference between the chair and sofa is in the length, all other dimensions being identical. No-sag springs are arched from the front to the back of the seat frame, then covered with burlap. A scrap of heavy fabric also can be used, as in the sofa seat in Fig. 5. Seats and backs of the sofa and chair are padded with cotton batting, foam rubber or urethane foam, Fig. 4. The padding of the seat is folded down over the front face of the frame.

To fit the upholstery material, first cut a piece of material about ⅜ to ½ in. larger than the frame dimensions and round the corners slightly. Next, cut a 5-in.-wide strip of material for the band. Sew the band to the cover material, with a welt between the two. A home sew-

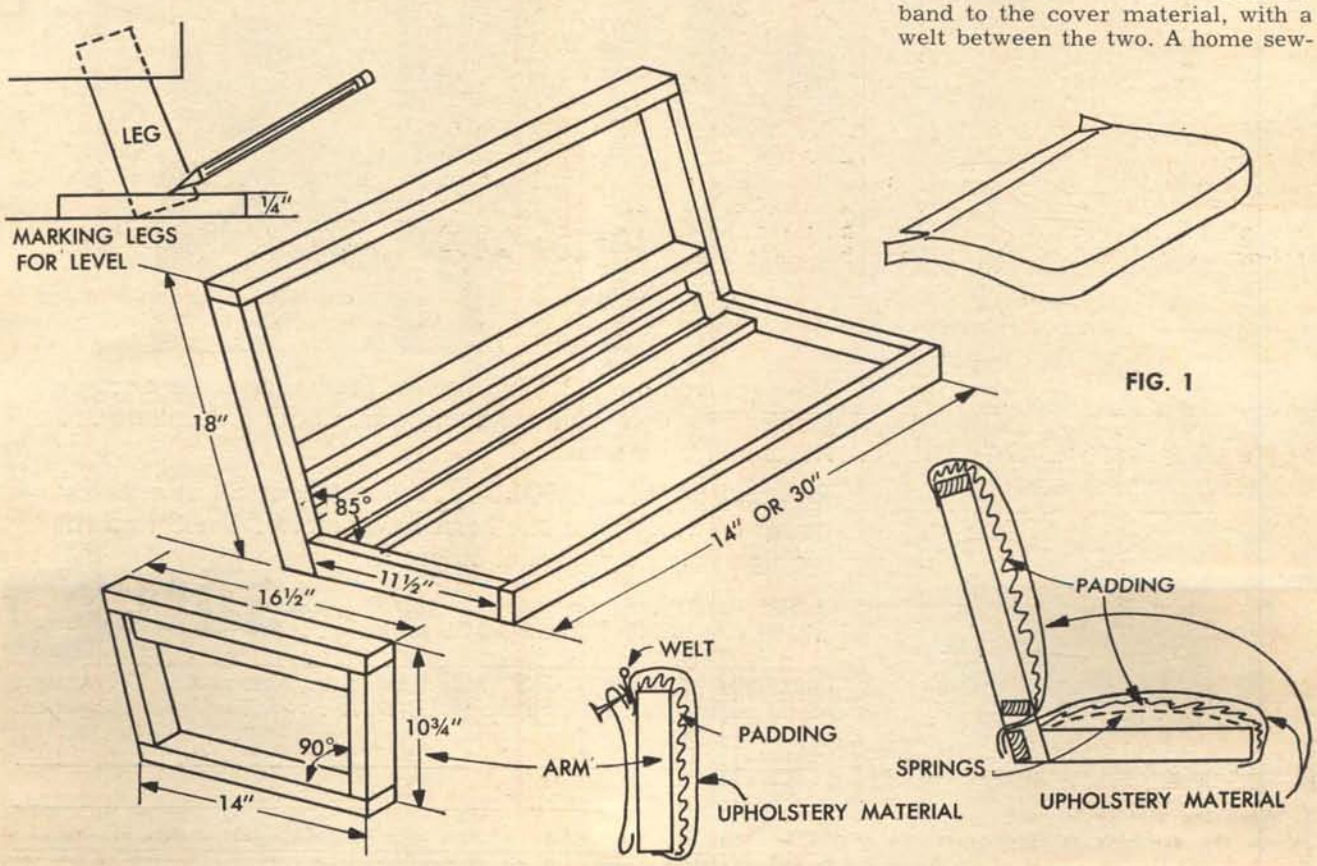
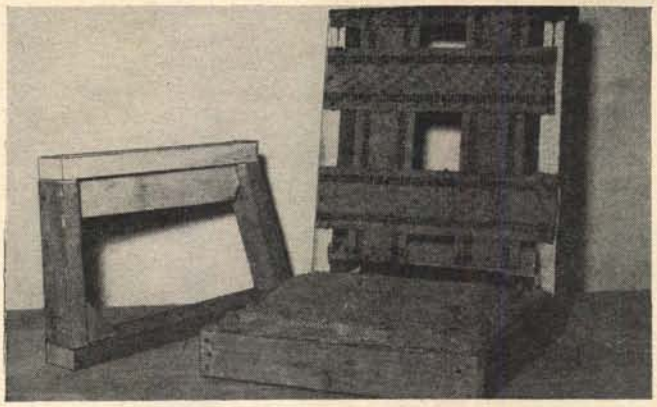


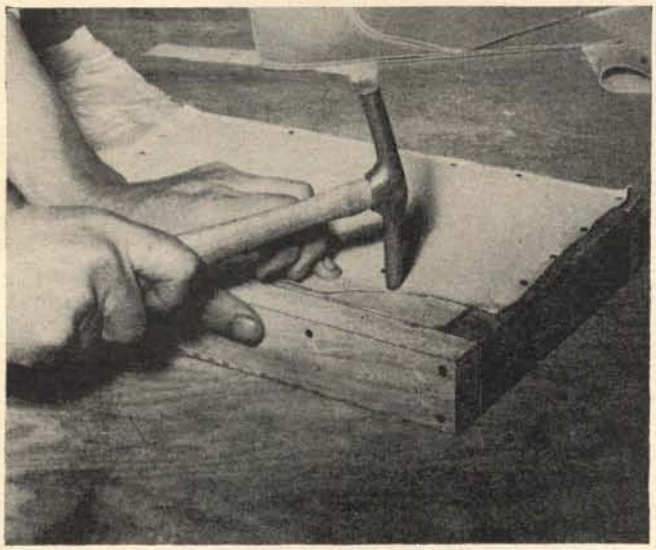

FIG. 1

ing machine can handle lighter fabrics; heavier materials, including some plastics will have to be sewed on a machine used by professional upholsterers or awning makers. Stretch the sewed covering over the padding and frame, pulling the lower edge of the band over the lower edge of the frame. Hold it with a tack about every ¾ in. Tack the ends of the band to the back side of the rear of the frame. Repeat the padding and covering operation on the back, then stretch the rear edge of the seat cover and the lower edge of the back material down through the frame members and tack to the wood.

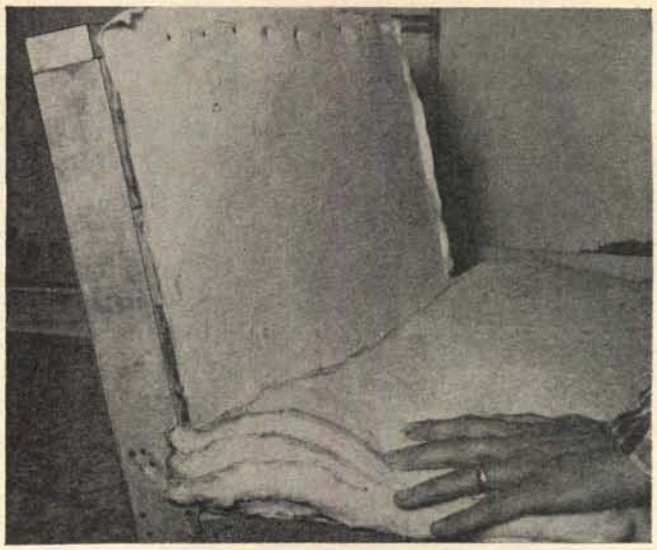
Pad the inside surface of the arms with a layer of cotton over ducking tacked to the frame, Fig. 3. Extend the padding over the top and front surfaces of the arm. Cover the padding with a piece of burlap that wraps over all four edges of the arm and is tacked to the outside surfaces of the arm frame. Now, nail or screw the arms to the frame, Fig. 6. Fit a welt along the front and top of the arm, fold the edge of the upholstering material and tack it to the arm with the welt in place. Cover the back of the frame with a piece of upholstery material also. △ △



**2. Canvas webbing is tacked across back of both the chair and sofa, while no-sag springs are arched across seat bottom. Burlap is tacked over the springs. Note that arm here is upside down.**

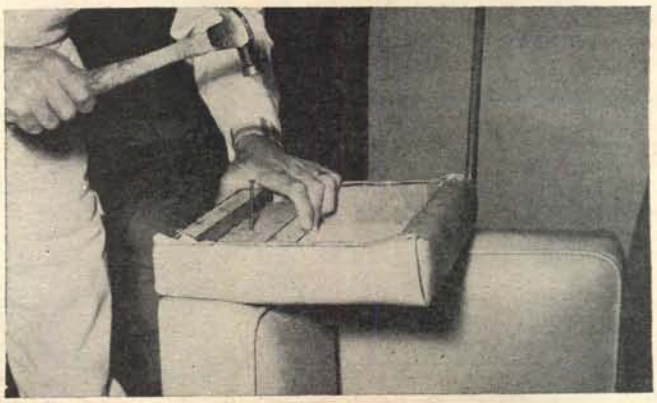


**3. Cover inside surface of arm frames with 8-oz. ducking, also cover webbing of back frame with ducking. Material is stretched tight, tacked to frame. This is done on both sofa and chair.**



**4. Seats are padded with cotton batting, top layer of batting is folded down over front of frame. Seat backs receive the same padding treatment. Foam rubber or urethane foam could be used.**

**5. When the seat cover, welt and band have been sewn together, the assembly is fitted over the seat. The band is stretched over the lower edge of the frame and tacked securely.**



**6. After the inside surfaces of arms are padded with cotton over a layer of light canvas or other fabric, arms are nailed or screwed to seat frame. Material is applied to outside of arm last.**

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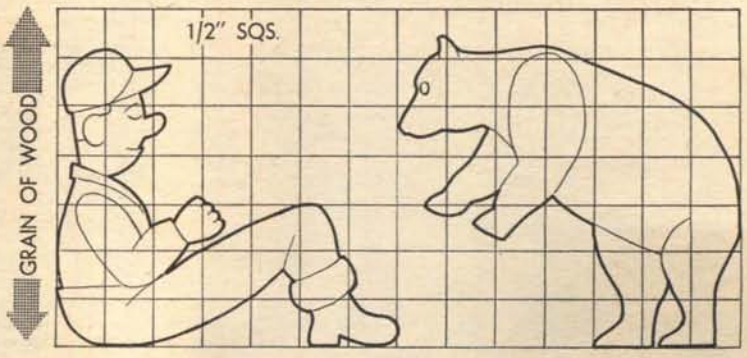
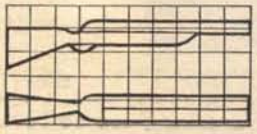
# Mighty Hunter

**JOHN F. CLARK**

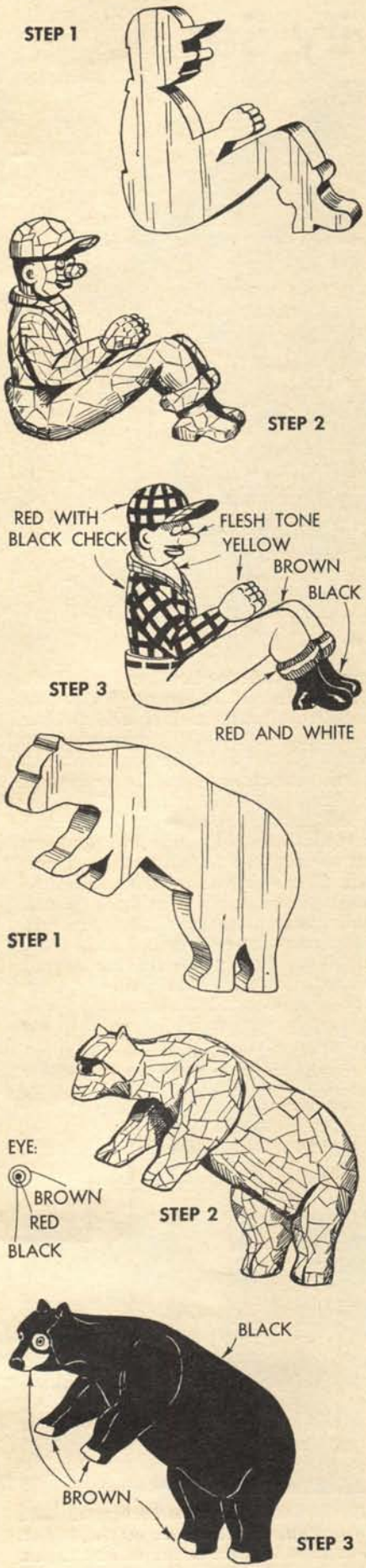
HERE IS an amusing scene for you whittlers and woodcarvers to tackle. The finished piece would make a fine "gift" for your hunting friends. The tree against which the hunter is snoozing is a section of dead tree limb or a sapling. A larger limb, drilled lengthwise, would permit the installation of a harp and shade so the item could be used as a lamp. Make full-sized patterns of the bear and hunter by enlarging the squared drawings, then trace the patterns on the stock and rough-cut with a jig saw or band saw. Carve and shape in the various steps shown, then sand smooth and apply paints in the color scheme suggested. After the paint is dry, glue the sapling and the figures to a piece of hardwood, then spray the completed set with clear varnish from a spray can. The spray application prevents the varnish from making the colors run, which using a brush might cause. △ △



1/4" SQS.

1. CUT OUT BLANKS
2. ROUGH OUT WITH KNIFE
3. FINISH WITH SANDPAPER





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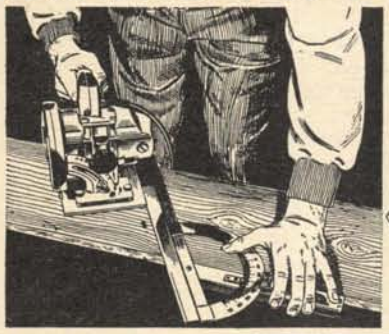

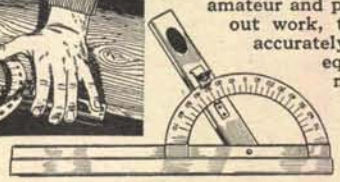

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# Lathe-Turned Nativity Set

WILLARD AND ELMA WALTNER

SOMETHING DIFFERENT in the way of holiday decorations is this group of stylized, lathe-turned nativity figures. Turning blocks of maple, walnut, cherry and mahogany are used to provide pleasing color contrast, and the figures are given several coats of varnish or shellac for a high-gloss finish. All heads and hands are turned of maple, except those of the one king that are turned from walnut to simulate his dusky complexion. The various woods can be used in any combination desired to produce the effect of different colors of clothing. However, the angel is made completely of maple, to provide the appearance of light-colored garments.

ANGEL: Turn all units separately, cut the wings from birch-faced ¼-in. plywood or other light-colored stock. As with all figures, use a short length of ¼-in. dowel to connect head and body, or turn an extension on the body to fit in a hole bored in the head. Hands are "pegged" into holes in the ends of the sleeves. Shape the upper ends of the arms to fit against the curve of the body. Glue wings to body, glue halo to head at angle, so it is above head at the front.

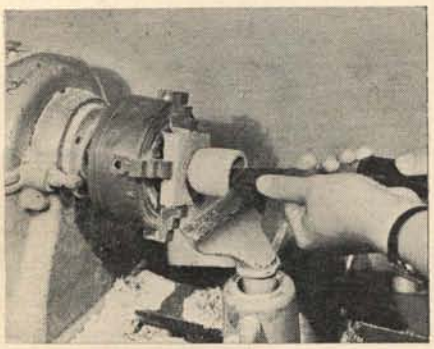
MARY: Turn units and assemble. To make the headdress, turn the outside profile, then hollow the inside until the shell is about ¼-in. thick. Cut off waste portion, assemble the figure in the same manner as the Angel.

JOSEPH: Turn units and assemble, making headdress in same manner as for Mary. Note that Joseph's arms are at his sides.

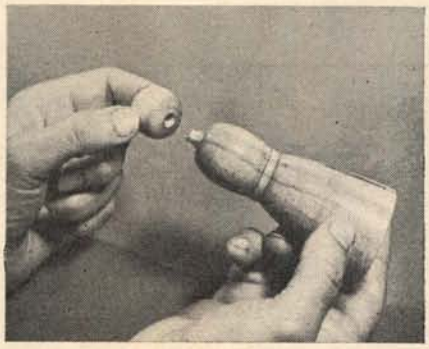
KINGS: Turn units, crowns being turned separately. Note that in hollowing out headdresses that ¾ in. of top is left solid. Instead of using complete ball for head, split in half. Glue half-ball to front portion of headdress that is left solid. Glue headdress-and-head assembly to body. Glue gifts between hands. Arms of each King can be positioned differently to add variety.

INFANT: Ends of crib are two turned disks with about ¼ in. cut off so crib will set solid. Center portion of crib is turned in same manner as headdresses, is split in half and upper, solid portion is cut off. Glue center between ends. Turn head and body of Infant in one piece, of maple. Turn halo of maple and glue to head on a slant so halo is away from head at front. Glue Infant in crib.

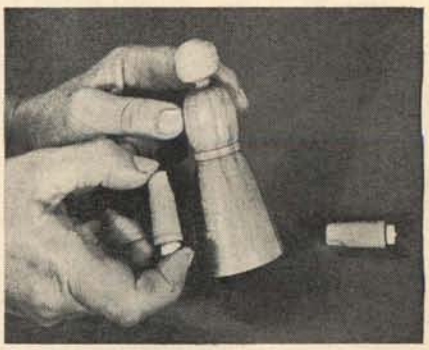
Since these figures are highly stylized, no features are shown; however, they can be indicated by dots of enamel. Keep the features simple for best appearance. △ △



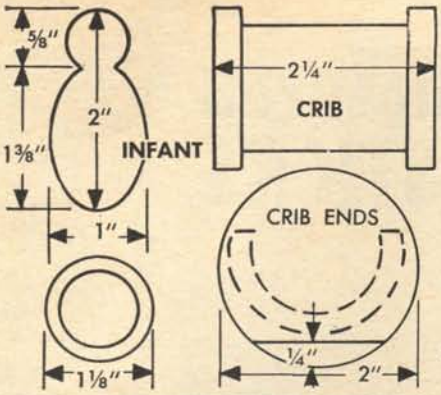
**Turn outside contours for various headdresses, then hollow out inside so about ¼-in. of stock is left.**

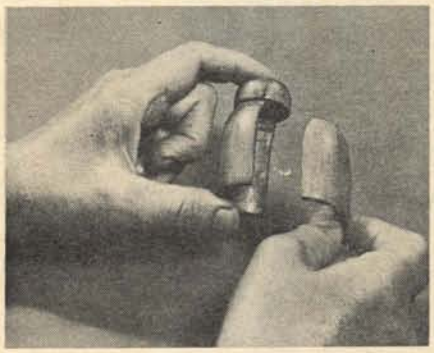


**Short lengths of ¼-in. dowels can be used to join heads to bodies, or "peg" can be turned on body, whittled down.**



**Upper portions of arms are carved with sharp knife to fit curves of the bodies. Glue them in place at the desired angles.**

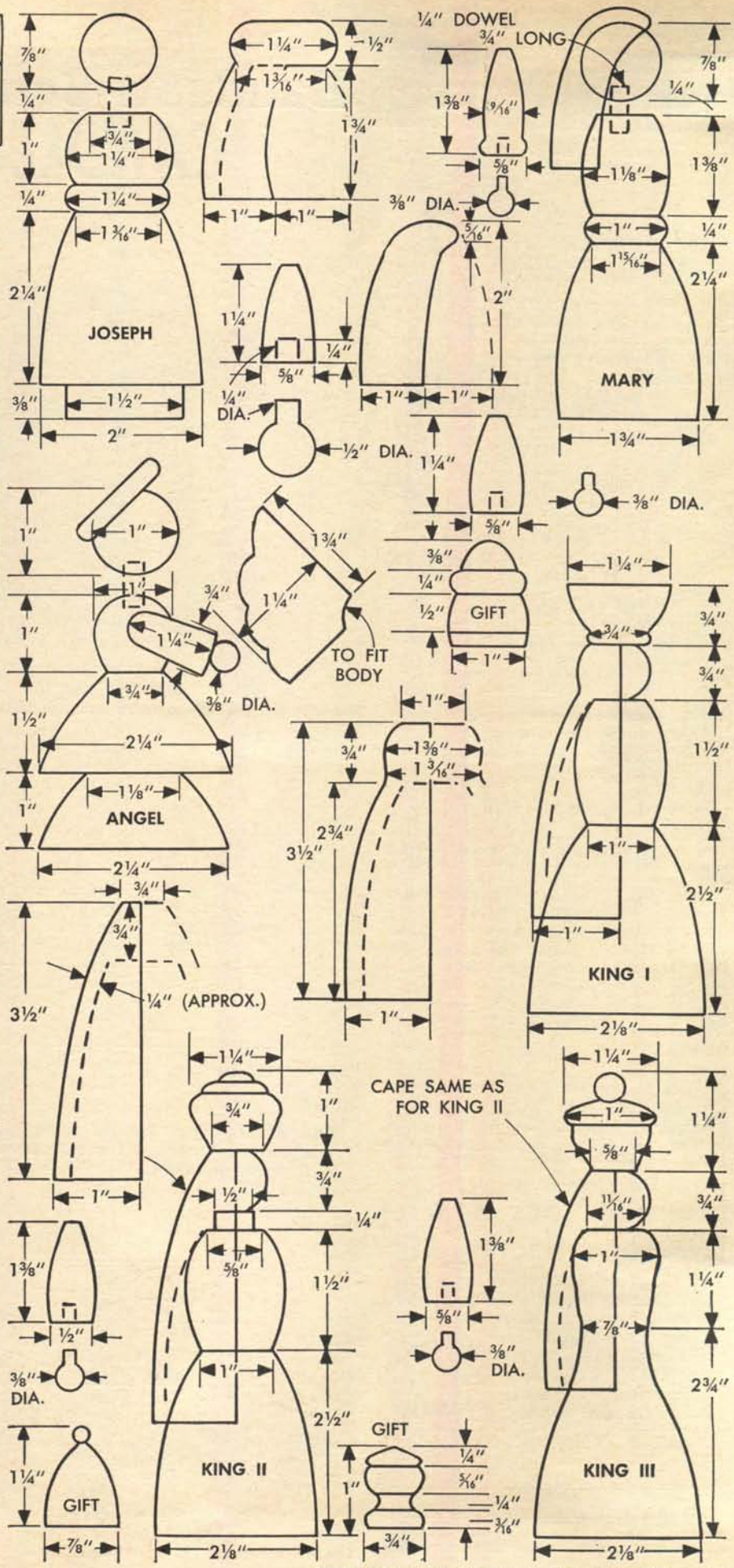


Use band saw or jig saw to cut off waste portion of various headdresses. In the case of the kings, headdress is split.

Center portion of Infant's crib is glued between the two end disks. Note that flat is cut on the edge of each disk. crib will set flat.

Arms and wings of angel are shaped to fit curve of body, then halo is attached so front is clear of head.



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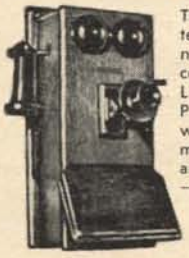

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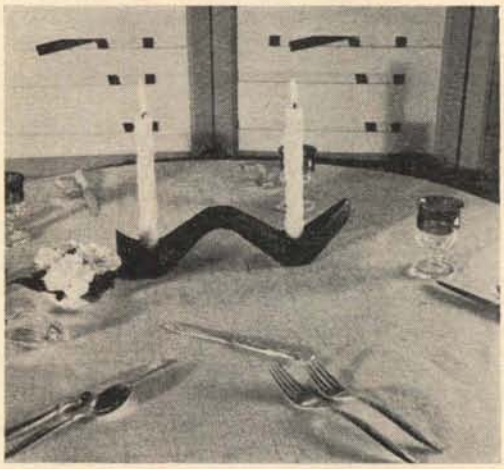
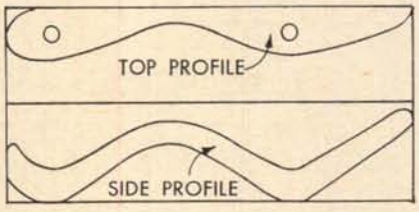
# Bandsaw-Sculptured *CANDLESTICKS*



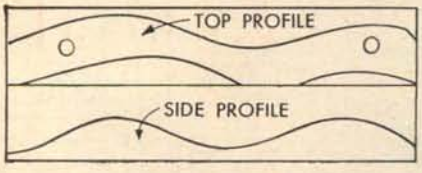
**To "bandsaw-sculpture" candlesticks like this one, use the same technique required to form cabriole leg, as for period furniture.**

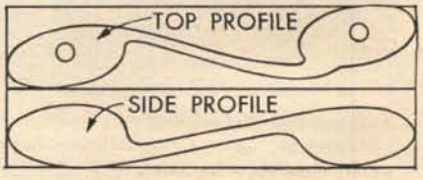
IF YOU have ever cut a cabriole leg on a bandsaw you will recognize immediately the technique that can produce intricate and unusual designs. Even if you haven't cut a cabriole leg, you will be delighted by the ease with which this type saw can produce pieces that resemble hand-carved shapes.

The idea is simple: The side profile of the project is marked on one



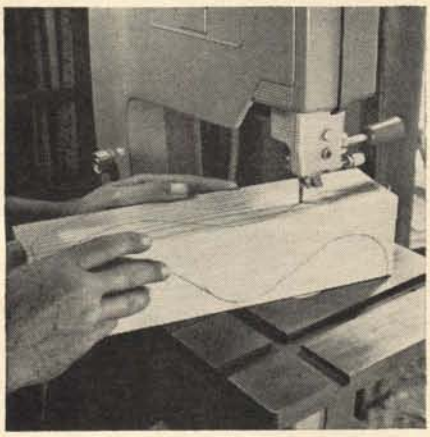
**Candlesticks can be simple in design; this one was waste 'eft over, coated with plastic aluminum.**



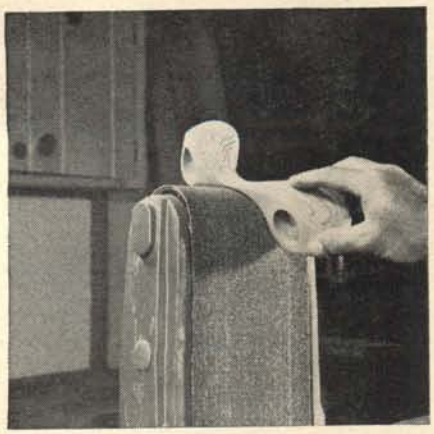



side of the stock, the top profile marked on an adjacent side. After you have bandsawed one profile, the waste material is tack-nailed or taped back in place and the stock is cut again, following the outline of the second profile. Quite often you will find that the "waste" pieces are shaped interestingly enough to be used as additional projects. If you preplan, you can produce two or three projects from one piece of stock, with no waste left over at all.

Most any kind of wood can be used, but check carefully to see that there are no checks or cracks that might be deep enough to spoil a project. Holes for the candles can be drilled before or after cutting; this depends on the ultimate design. If dripless candles are to be used, holes drilled in the wood are adequate; otherwise buy and insert ready-made candle cups or eyelets that have a flange. △ △



**Top and side profiles are marked on adjacent sides of stock. After first cuts, waste is tacked or taped in place.**



**Belt sander does good job of smoothing curves, eliminating sharp edges, giving project "hand-carved" look.**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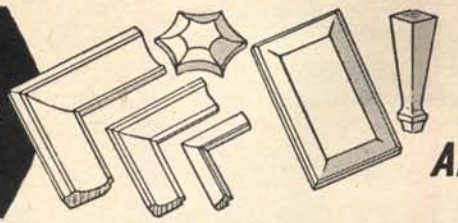

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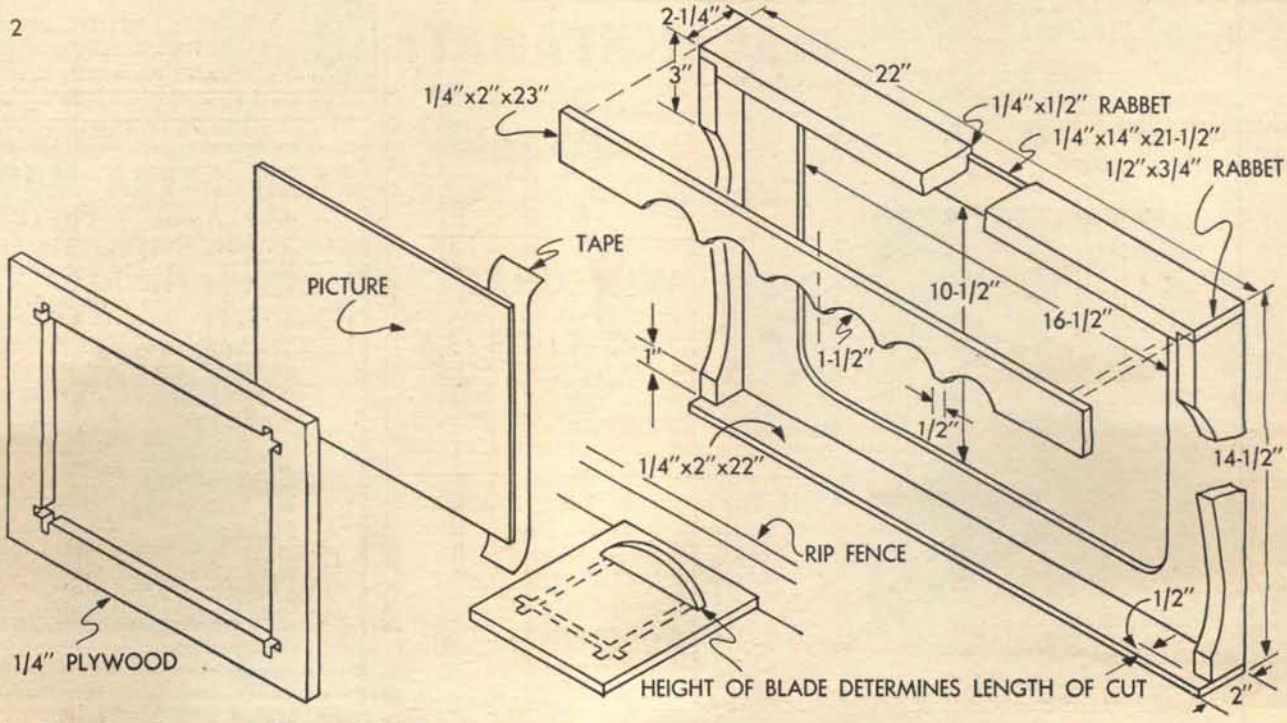
# "Miterless"

**1. Frame at left is more important, does not hide picture, a place mat. Silvery frame at right sets off scene.**

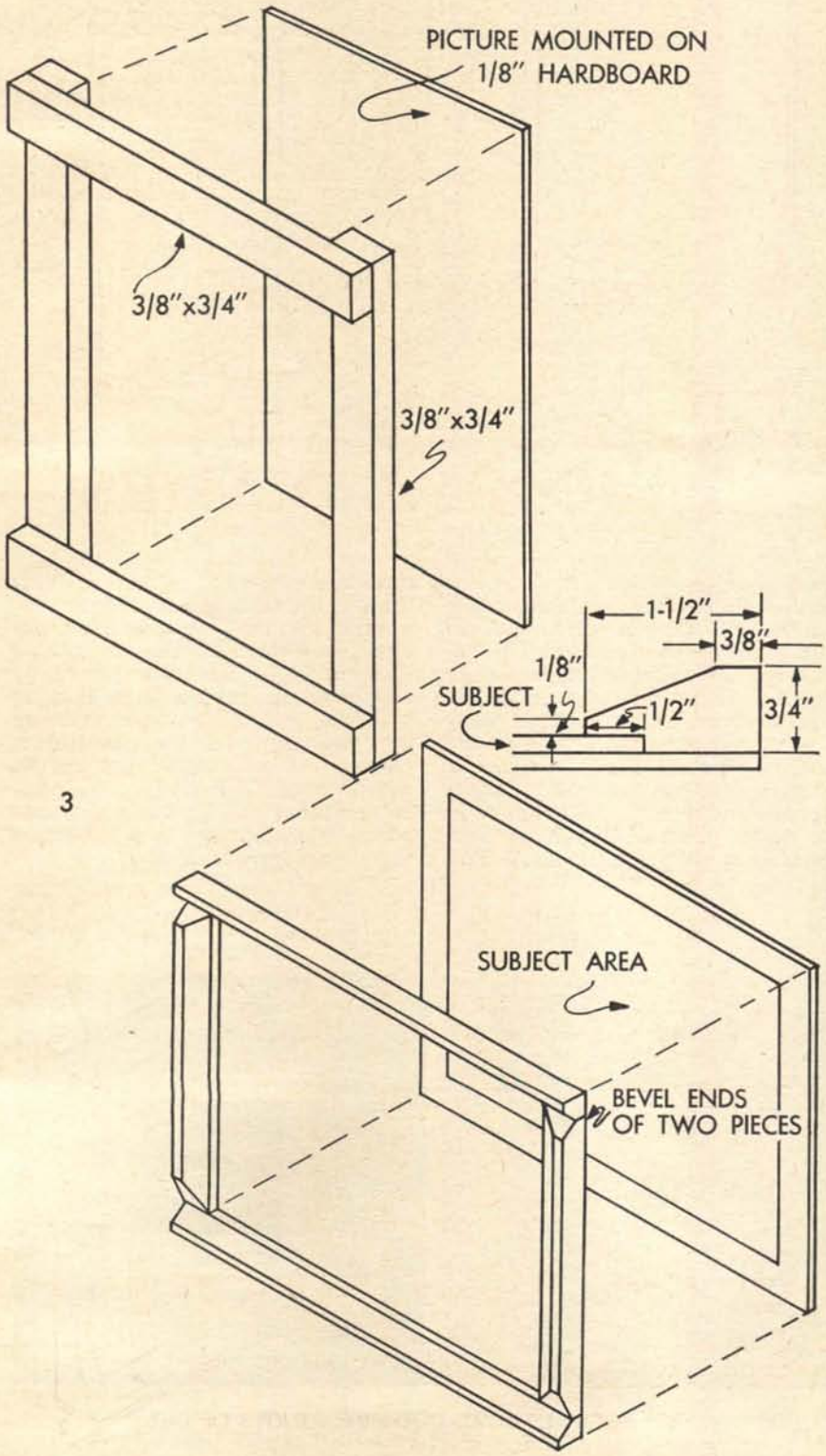
# PICTURE FRAMES

FRAMES FOR PICTURES need not be the standard mitered-molding assembly generally used. As a matter of fact, some pictures can be made more interesting or even complemented by a frame of unusual shape or style. For example, the frame in the lefthand photo in Fig. 1 is used in a kitchen where the shelf at the bottom provides space for knick-knacks. These objects complement the picture, (actually a place mat),

2

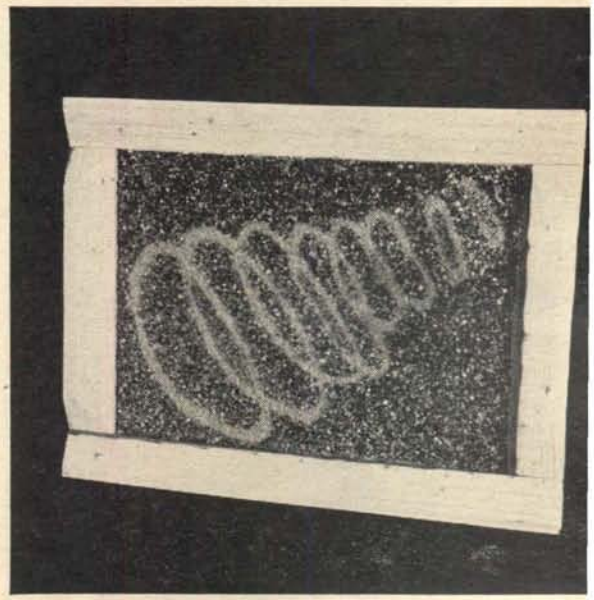


and give it a "three-dimensional" look. Construction details for the frame are in Fig. 2. In the right-hand photo in Fig. 1 is a frame made by cutting out a piece of plywood or solid stock. In Fig. 2 is shown how the blade of a table saw is gradually raised to make the cutout. With a radial-arm saw, of course, the blade would be lowered through the stock. The frame is roughed up with a rasp after it is cut out, then painted in a silver color. The picture in the frame actually is a Christmas card. Lap

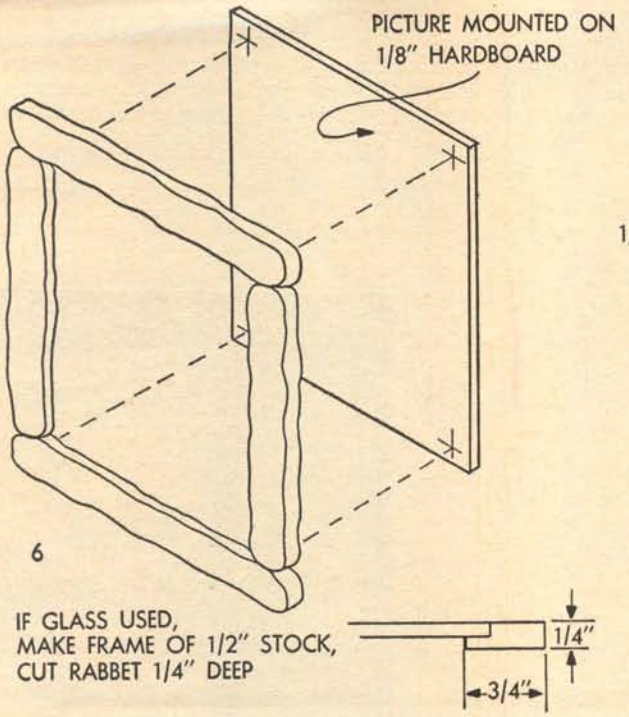


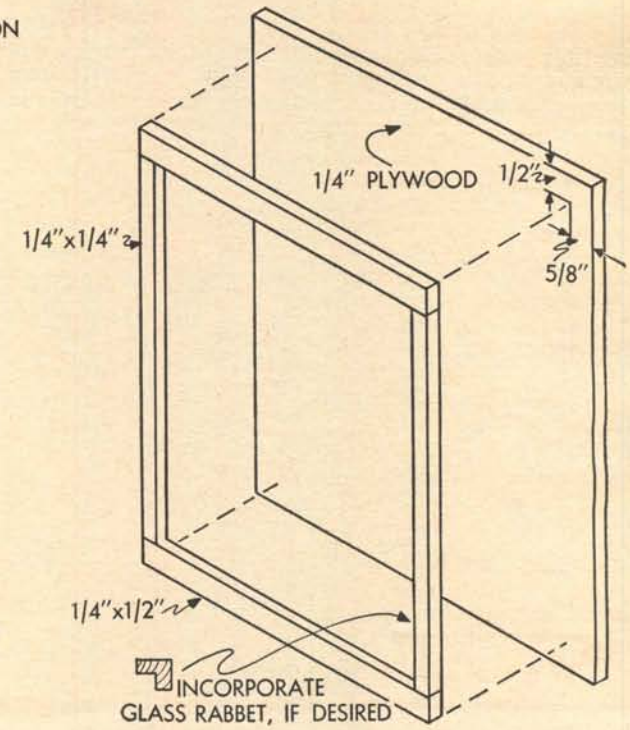

3

**4. Appeal of outdoor scene is retained with rustic frame in natural-wood finish. Picture was cemented to hardboard.**



**5. Mosaic was done with aquarium gravel on heavy cardboard, then tacked to frame, backed with hardboard.**



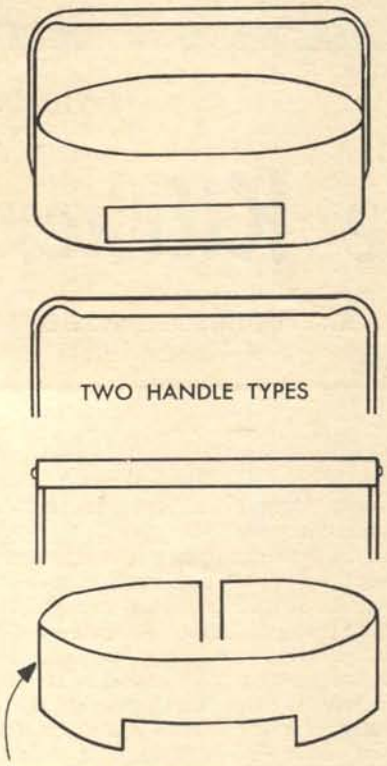

joints are used for the frame in Fig. 4, the upper drawing in Fig. 3 giving the construction details. Note that the ends of the vertical members are tapered so the horizontal pieces are more nearly flush with the vertical members. The frame is rough-finished to complement the outdoor scene it holds, and is finished natural. Butt joints are used for the frame in Fig. 5, the frame members being glued and tacked to the backing. The mosaic consists of aquarium gravel sprinkled on glue-coated cardboard. The cardboard then is cemented to ⅛-in. hardboard. Construction details and the method of rabbeting for the picture are shown in the lower drawing in Fig. 3. Wood putty is plastered over the frame in the lefthand photo in Fig. 7 to produce a "gesso" effect. Assembly details are shown in Fig. 6. Frames in the center photo of Fig. 7 are simply shapes cut from plywood. Pictures are cemented to the back surfaces of the frames. As in the photo, a grouping of shapes can be decided beforehand. The righthand photo in Fig. 7 shows an extremely simple frame, which is in keeping with the starkly modern style of the painting and its delightfully casual subject. The picture is mounted on hardboard, which then is cemented to the back surfaces of the frame, or set in a rabbet, if that is preferred. △ △

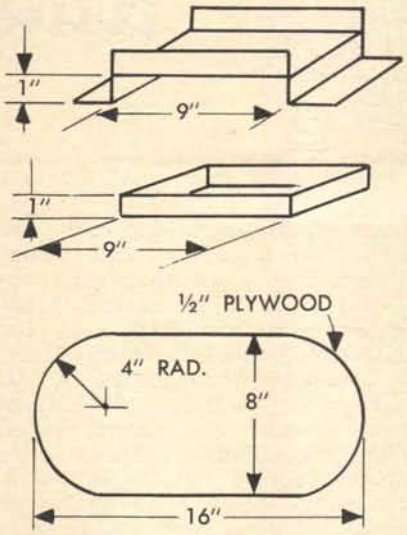
**7. Gesso effect on frame at left is achieved by plastering frame and backing with wood putty, surface gilded or stained. Center photo shows frames cut from plywood sheets. Unpretentious frame retains mood of the subject in righthand photo.**

# TOOL TOTER

R. A. HILL

SMALL ENOUGH to be carried easily, yet big enough to hold a good selection of hand tools for odd jobs around the home and shop, this tool toter is "quiet" because the side is made of a scrap of leather belting, or a strip of linoleum. Cut the bottom from ½-in. plywood, then bend a piece of light sheet metal to provide a "shield" for the small drawer that is handy for small bits, chisels and nails, screws and other fasteners. Screw the metal to the base, then wrap the leather or linoleum around the base and mark the opening for the drawer. After cutting the opening, attach the linoleum to the base with nails. Use a strip of light metal inside and outside the joint in the linoleum strip and drill it and the linoleum for rivets. The handle can be bent from ½ or ¾-in. thin-wall tubing, or made from two steel flats and a piece of dowel. Screw it to the base and bolt it to the linoleum in two places, using washers under the nuts. The drawer can be made of sheet metal or thin plywood, and should be a snug fit. △ △



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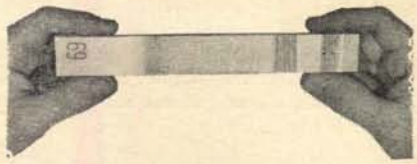

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| 8 | Blonde | 54 | Medium Red Cherry |
| 9 | Natural Mahogany | 60 | White Stain |
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| 21 | Blonde Oak | 66 | Mahogany |
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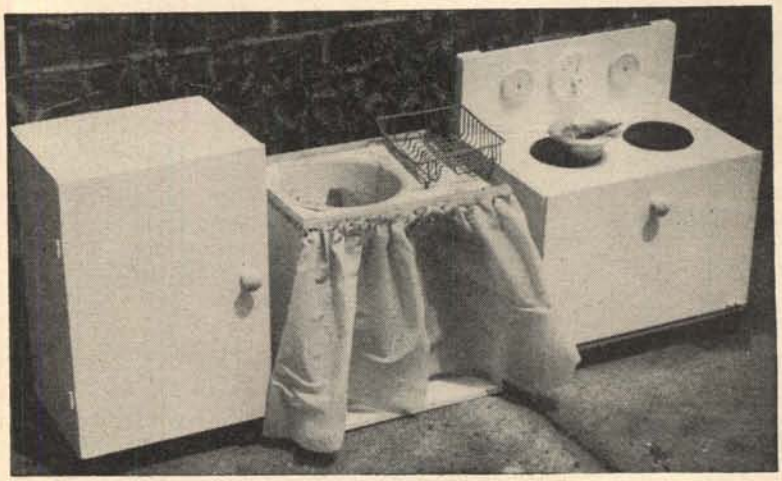


Refrigerator, sink and range in Kiddie Kitchen are made from packing boxes, *fitted with* legs, imaginative accessories.

# Kiddie Kitchen

M. E. DOHRS AND N. SIELAFF

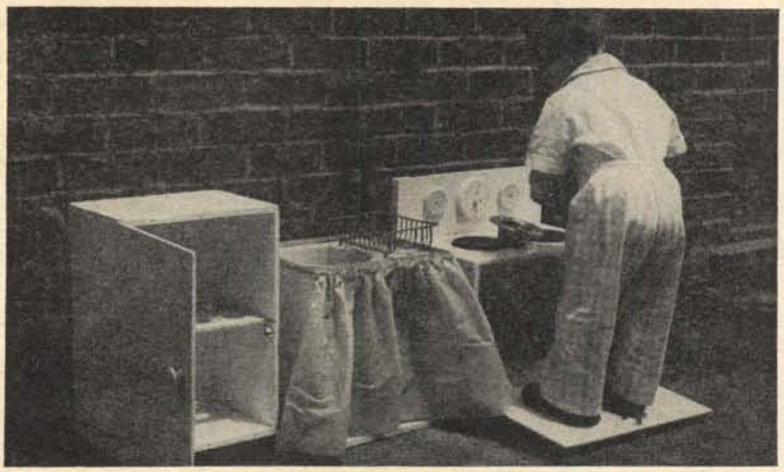
"And now to get the dishes done!" Kitchen units are simple to make, but will provide a world of fun for youngsters.

IF THE RIGHT SIZE packing boxes are obtainable, even Mom can assemble this three-piece kitchen ensemble for toddlers. If crates are not readily available, Dad can glue and nail together some sturdy boxes that Mom can fit out for the various units. Our photos show the kitchen units being used outdoors, which is best when sand, mud and water are the cooking ingredients, but in this wintry weather the items can be used indoors and the cooking materials can be restricted to soap suds and water that are easily cleaned and mopped from the floor. Apply two or three coats of exterior house paint to the insides and outsides of all three units, which will permit them to be cleaned with a garden hose when they are used outdoors or in a basement.

Fit the "refrigerator" with one or two shelves and, where possible, provide an ice-cube tray. Use an inexpensive cabinet latch and knob. Dad might even have latches and cabinet pulls in his "miscellaneous" collection in the shop. The kitchen sink is a crate on its side, the side member (if it is a crate), being replaced by a piece of ¼ or ⅜-in. plywood. A hole is cut in the plywood to just fit the outside of a toddler-size plastic dishpan, under the rim. A scrap piece of plastic sheeting, linoleum or plastic laminate is cemented to the top for easier cleaning. Plastic or metal edging will protect the sink edge and give it a more realistic appearance. A piece of discarded plastic shower curtain is tacked to the front of the sink to give it a more frilly, feminine appearance and keep the dust and water out of utensils stored beneath the sink.

The range also is a crate on its side. Note that the oven door is hinged at the bottom. As demonstrated in the one photo, some young homemakers will use the oven door as a ramp to better reach the burners on the range. For this reason, be sure the hinges are strong and well fastened. The control panel at the back of the range is a piece of ¼-in. plywood. It is nailed to two lengths of 1 x 1 they in turn are nailed to the back of the range so the panel fits neatly. The range controls are lids from jelly jars, the burners are lids from coffee cans, painted appropriate colors. Movable clock hands are cut from light sheet metal, held in place with a bolt fitted through a hole bored in a cap from a tube of tooth paste. Clock numerals are hand painted or can be figures cut from magazines or newspapers. A coat of clear shellac protects them.

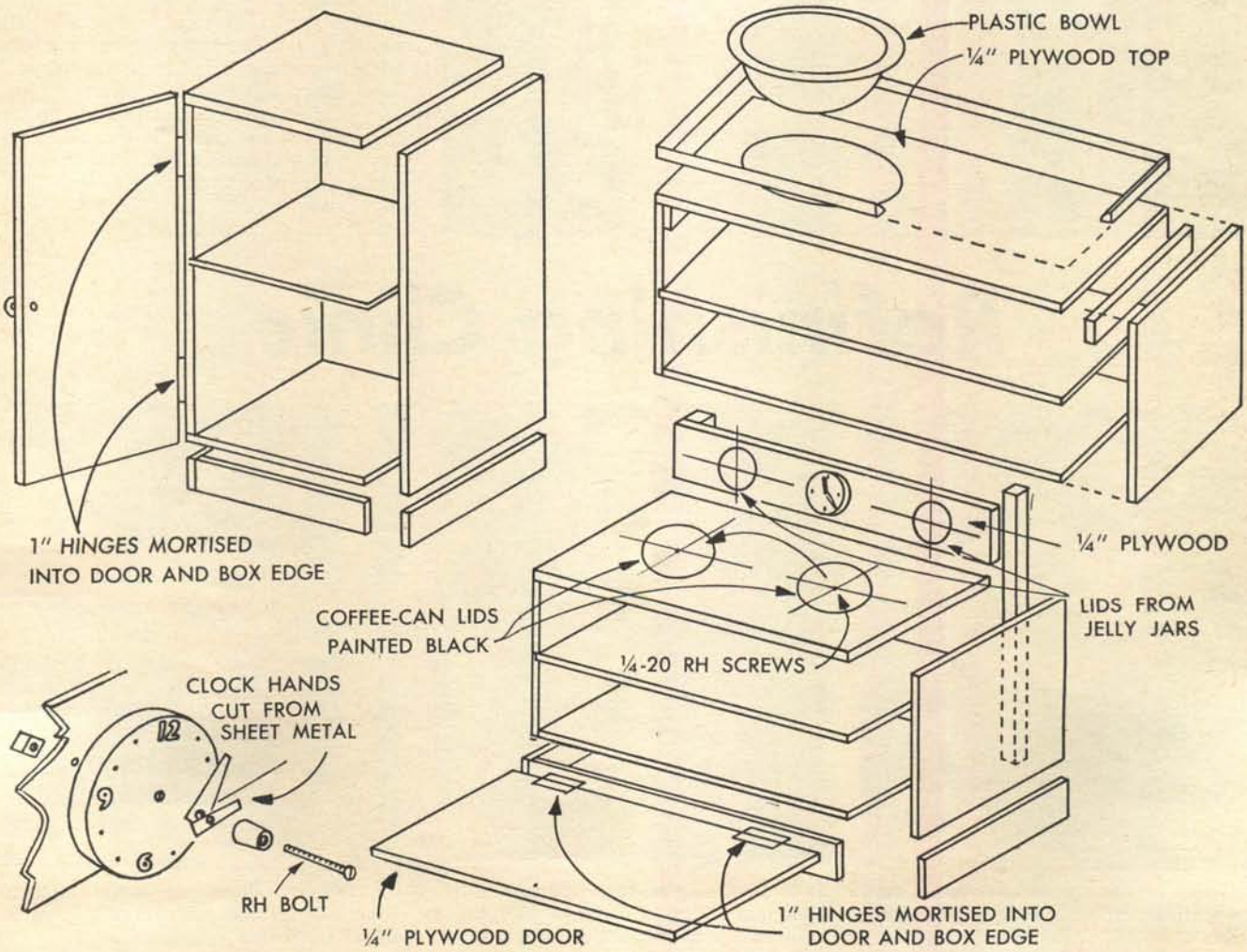
Short lengths of 2 x 2 are used for legs on the refrigerator and range, but no legs are required for the sink unless the toddler finds the sink too low for comfort. To keep their play kitchen safe, give the toddlers only soft plastic utensils



**Knob, simple catch and pair of hinges are used on doors of refrigerator and the range. Top of sink is covered with plastic, fitted with trim around edge.**

**Two young homemakers are busy in kitchen, washing dishes, cooking imaginary food on range that has no heat.**

sils. Many plastic containers used for various detergents and foods, when empty, can be given to the young kitchen mechanics for their play. These flexible-plastic containers are perfectly safe for youngsters to handle, and there will be no problem with rust or corrosion, as there might be with metal containers. Sand smooth and round the edges of all three units to prevent splinters from being a problem, and make sure there are no projecting nails. △ △



1. Note generous use of masking and newspaper to protect surface from remover. Upper cabinets are stripped.

# Stripping Kitchen Cabinets

G. L. BIX

ONE SUBJECT about which we have received much mail is the removal of finishes from attached wooden surfaces such as kitchen cabinets and woodwork. While the same general principles apply to stripping fixed objects as to stripping movable furniture, due to the large number of requests for information we are going to devote this article and the next to the stripping and refinishing of a set of kitchen cabinets.

The main difference in the two operations is that it is necessary to protect the adjoining surfaces from paint remover when fixed objects are stripped. Fig. 1 shows how the insides of the cabinets and all nearby surfaces have been covered with newspapers and masking tape. The doors have been removed. In our professional operation we take the doors to the shop as it is quicker and less expensive. For the home owner we recommend that he take the doors outside or down to the basement for stripping.

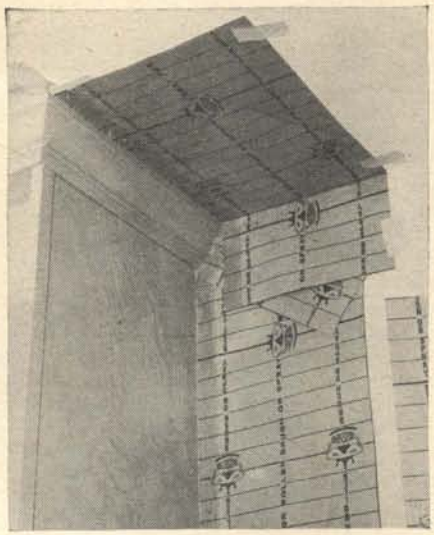
# Refinishing Clinic

2. Paste or semi-paste remover is used on vertical surfaces, is applied in generous amounts. Again note masking.

3. Good-quality remover loosens finish, does not dissolve it. Note how finish bubbles up on surface of molding.

4. Loosened finish is readily scraped from flat surfaces of cabinets, then is wiped on folded newspaper.

5. After finish is scraped off, scrub down surfaces with steel wool dipped in lacquer thinner or paint thinner.



6. A few spots may require additional remover, some more scrubbing with steel wool before applying new finish.

We use a paste or semi-paste remover on vertical surfaces, Fig. 2, as the material clings better and thus works on the finish. Use generous amounts of remover and let it do the work. Note the masking tape we are using. This is a new material, available in 3, 6 and 9-in. widths. Adhesive is on just one edge of the masking material, and the adhesive will cling even to carpeting. This makes it fine for protecting wall-to-wall carpeting. The masking is made by the Masking Corp., Homewood, Ill., and will soon be available to the public. Fig. 3 shows the loosened finish, in Fig. 4 it is being scraped off. In Fig. 5 we are using steel wool and paint thinner to clean the stripped surface and neutralize the remover. In Fig. 6 the surface is cleaned, with just a few spots that need to be retouched with remover.

In our next article we will show the application of a new finish.

**Q. I have stripped a table and want to refinish it, but find that part of the wood is mahogany and the remainder is different, probably walnut. How can I refinish the two to look as though they are the same?**

A. We first will say that if a Bix dealer is in your area he can professionally strip the item so both kinds of wood will be almost the same color, and will be compatible in tone when stain and finish are applied. We also have recently developed a special stain that will provide the same color to woods of different tones, while still keeping the wood grain showing in its natural beauty. In the event that neither our service or product is available in your area, we can only recommend that you stain one wood the color you wish, then alter the stain with oil color so that it will produce the desired color on the other wood. This will require a bit of experimenting, but is not as difficult as it sounds.

**Q. We recently stripped a table with remover and had a successful job, but there is an oil spot on the top. How can we remove this oil spot so it will not show?**

A. This a problem frequently encountered, so if I have answered a similar question before, some of you may have not seen my answer. Scrub the entire table top with steel wool and a warm-water-and-detergent solution. The reason for scrubbing the entire top, is that scrubbing only the area of the spot will produce a spot of a different kind than the oil, but a spot nevertheless. While all the wood is still wet apply a liberal coat of a solution made by adding 1 lb. of oxalic acid crystals to 1 gal. of warm water and mixing thoroughly. Let the solution remain on the spot for 5 to 10 minutes, then flush the surface with clear water. Repeat the process until the oily spot is removed.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# WORKBENCH

# Research Department

Each issue in this column we will choose questions on home and shop subjects from letters sent to us. Only those questions which have wide appeal will be answered here. Questions on specialized subjects will be answered by individual letter from the Research Editor's Desk.

*For some time I have been interested in bending wood rather than sawing it to a curve for I felt that it would be stronger if I could hold the grain straight and not cut across it. However, I have not been able to get very much information as to how to proceed, except in a general way that you have to steam or boil the wood. Can you give me any idea as to how much boiling or steaming is necessary and if there are other ways that might eliminate the steaming? Mr. D.A.S. Missouri.*

You are correct in assuming that heat and moisture make a number of species of wood sufficiently plastic for bending operations. This is called plasticising the bending stock and is best done by boiling or steaming the wood at atmospheric pressure. Wood having a moisture content of 20-25% needs to be heated without losing moisture, wood at a lower moisture content must have both heat and moisture added. Since most air-dried lumber has an average moisture content of about 15-20%, and kiln-dry woods about 10-15%, steaming or boiling is necessary, rather than just heating. So, for the normal woods that you probably will use, plasticising can be accomplished by steaming or boiling the stock at the rate of one hour per inch of thickness. If, by chance, the wood is green, it will have a moisture content higher than 20-25% and the boiling or steaming times can be adjusted to about ½ hour per inch of thickness. After steaming, the bent part should be held in the desired shape until dry. About two days should suffice. In general, hardwoods possess better bending qualities than softwoods, and the best of the hardwoods for bending are white and red oak, elm, hickory, ash, beech, birch, maple, walnut, sweetgum and mahogany. Douglas fir, southern yellow pine, the cedars and redwood are often used for boat planking but generally are bent only to moderate curvature. It is important to pick first-class pieces of wood, free from cross grain, distorted grain and knots.

Another method of producing curved pieces of wood that will hold their curve and possess strength without the need of the plasticising (steaming-boiling) treatment is gluing thin laminated strips together in the desired shape. Both hardwoods and softwoods can be used equally well, and short pieces can be utilized in the inner laminations. One advantage of the laminated system is that there is much less chance of distortion later due to changes in the moisture content of the air than with steam-bent solid pieces. In the lamination process mentioned, you merely have to make a form to correspond to the shape you wish to produce, then glue strip to strip starting from the outer edge and working in to the desired thickness. Width can be whatever is required, thickness of each piece is gauged by its ability to bend to the desired form without breaking.

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Mrs. E.E.D., Jenera, Ohio.

We suggest you write to Gyro Lamp and Shade Corp., 5208 N.W. 35th Ave., Miami 42, Florida. Gyro furnishes a very complete catalog for 25c postage and handling. It is well worth the cost as a reference manual alone.

*I have approximately 75 per cent of the parts of a very old Dutch model spinning wheel. It is estimated that these parts are at least 150 years old. The wheel is a vertical type, as compared to the more or less horizontal Early-American spinning wheel. I have exhausted every possible avenue that is available locally to obtain information as to how to manufacture the missing parts. Can you tell me where any literature or data on the wheel could be obtained? Also, the names of any organization or individuals whom I might contact for parts and information on the wheel?*
Mr. M.S., Oklahoma City, Okla.

It is extremely unlikely that any detailed information ever can be found that will show how to duplicate the missing parts of the 150-year-old spinning wheel. The reason for this is quite simple; the wheels were made by individuals who were also chair makers, wheelwrights, coach makers and perhaps several others of the dozens of professions during the era of handmades, which included just about everything. Unfortunately, we know of no source of information.

It does seem that it might be possible to duplicate at least some of the parts simply by close study of the existing parts.


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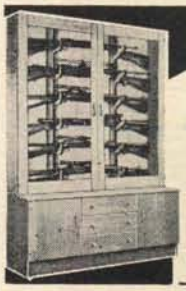

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*I recently bought a house that is about 30 years old. There is a full basement with a poured-concrete wall made by the form boards. I decided to coat the walls with a cement wash, then paint over the walls with an exterior-type latex paint. I dampened the walls thoroughly, then brushed on the mixture of cement powder and water. However, as soon as the cement dried it became powdery and can be brushed off. What is my problem? Why doesn't the cement wash stick?*
Mr. O.L.C., North Dakota.

A mixture of ordinary Portland cement and water is not a paint and will not bond to anything, even a masonry surface. We suggest you wire brush the foundation walls to remove the cement, then apply a waterproofing masonry sealer such as Aqua-Shield, made by the Camp Co. in Chicago, and available at most building-supply dealers. Follow the instructions for application in all details. Almost any type of paint then can be applied.

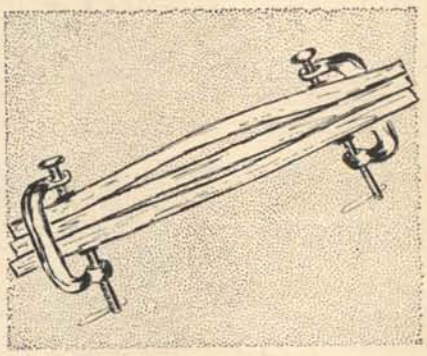
*Would like to buy a 1/6 or 1/8 H.P. electric motor to mount on a small workbench to drive a circular saw. Will cut and rip only light stock. Would a motor this size handle the job? Could the same motor be used to turn a lathe or drill press?*
Mr. L.S.Z., Clearwater, Minn.

We do not recommend a 1/6 or ⅛-H.P. electric motor for any woodworking machine. Even if you cut only ½ to ⅜-in. stock exclusively the tool would be much underpowered. The smallest size motor we can recommend—and this with some reservation—is a ¼-H.P. 1750 rpm motor. Better to invest in a new or rebuilt ½ or ¾-H.P. motor. You then will have the power to handle work of any size.

*I am making a gun cabinet of solid cherry stock and have some boards that are warped. I canot seem to draw them straight by clamping. Can you advise me how to straighten them so they can be used for the cabinet?*
Mr. R.M., Hagerstown, Md.

Unfortunately, you do not give us the sectional size or the length of the boards, or tell us how they are warped—whether cupped across the width or warped in wind; that is, along the length. This leaves us to guess, which we are reluctant to do.

In general you cannot draw any board straight by clamping. The fibers already have taken a set and once released from pressure the board will spring back to the original out-of-true position. The only practical way—and the method used by cabinetmakers and repairers—is to cut saw kerfs in the stock on the unexposed face to relieve the stress that causes the warping. This will allow the board to lie flat. Usually, the saw kerfs are stopped short of the edges, run about three-fourths through the thickness and are made lengthwise of the stock. Just what you should do we cannot say specifically, as the method and procedure will vary with the thickness of the stock, the length, and the nature of the warp.



*I am in the process of turning some salt and pepper shakers on my lathe for later use as Christmas presents. Could you advise me where I might obtain the pepper grinder parts, or even, if they are available for sale?*
*Mr. M.R.L., Alabama.*

We know of three sources for salt and pepper shaker fittings: Pepper-Mill Kits, 1972 Fullerton, Costa Mesa, Calif., Craftsman Wood Service Company, 2727 Mary St., Chicago 7, Illinois, or the Brodhead-Garrett Company, 4570 East 71st, Cleveland 5, Ohio. However, we suggest that you do not proceed any farther with your lathe turning until you know the size of the fittings you are planning to install.

*We have a new home built a year ago but have experienced a problem with a louver on the west end of the roof that allows the snow to blow in. It then melts and soaks the hall ceiling. There is a slanting roof on the ends of the main roof coming up to the louver so that the snow accumulates and the winds sweep it in. I had thought of putting a plywood shield over the one louver, but an electrical engineer said it might cause the insulation to freeze. However there are two more louvers in the south dormer and six in the overhang. The louver at the east end of the roof gives us no trouble.*
Mr. C.J.D., Swisher, Iowa.

If we understand correctly your description of the attic louvers and their locations, it probably would be permissible to close the one that admits snow. Ordinarily, we do not recommend closing attic louvers during winter months, but in your case we think it worth a trial. Use plywood and attach it to the louver frame with screws, **not** nails, so it can be removed easily at the end of winter.

Incidentally, the insulation does not freeze, only the moisture that may condense at some point in the attic will freeze.

*Can you please advise me where I can order a left-handed 32-tooth escapement wheel with a verge to fit it? I am making a clock and have not been able to find one.*
Mr. H.M.R., San Angelo, Tex.

We're rather doubtful about a left-handed escapement wheel with verge but you might write Ralph Herman Clock House, 628 Coney Island Ave., Brooklyn 18, N. Y., or Modern Technical Supply Co., 55 West 42nd St., New York 18, N. Y.

*Where can I purchase some of that English furniture wax that produces such a long-lasting shine and is pleasantly scented? Used to get it from a source in New York that no longer is in business.*
Mr. C.R., Jr., Carmel, Calif.

Lavender-scented "Cabinet Makers Wax" imported from England can be obtained from Gaston Finishes, Bloomington, Indiana. A 6¾-oz. tin is $1.75 ppd. Other than the pleasant scent, the imported wax differs from most cabinet waxes only in that it has refined beeswax in it, something lacking in most of the common cabinet waxes.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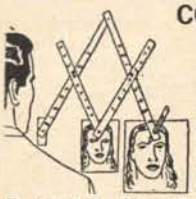

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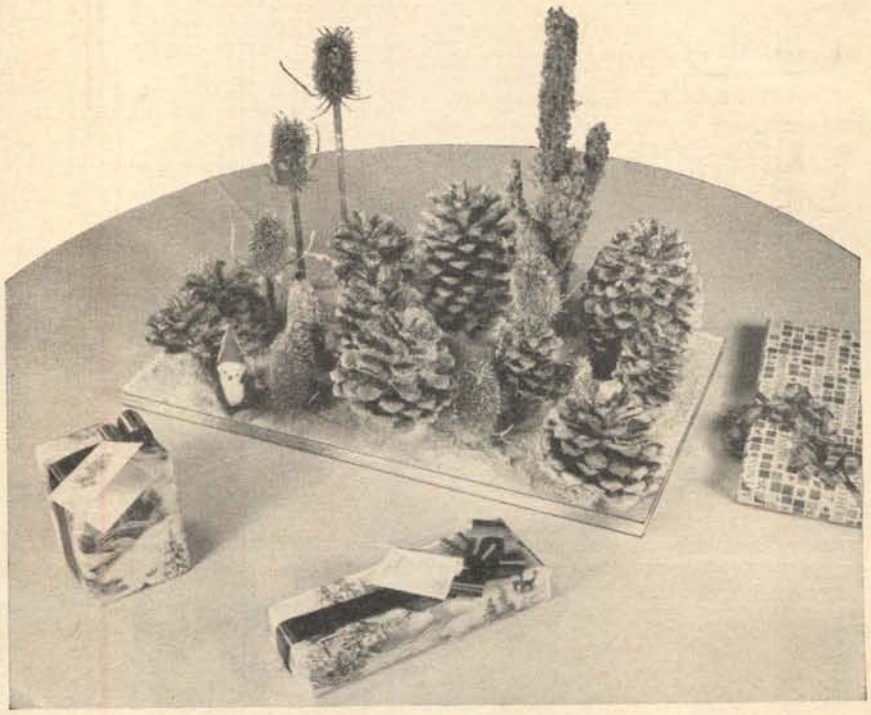
# Women's Page



## Snow Scenes For CHRISTMAS

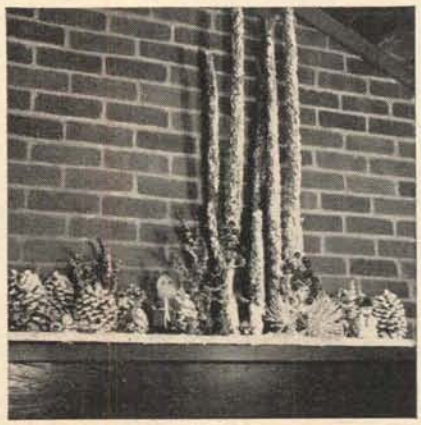


TABLE CENTERPIECES, mantel decorations, a snow scene to add a point of interest in a room, all these can be done with a few materials, imagination and a little time. First, get a piece of ¾-in. lumber or plywood; a piece about 10 x 15 in. is good for a first, "practice" project. Drill various-size holes from ⅛ to ½ in. in a random pattern in the board, then place your material in a circle around the board. Materials can be pine cones, weeds picked up on a summer excursion in the country, small ornaments and figures purchased in a gift shop.

Fit the objects in the holes, rearranging until you have a design that you like. It may be necessary to drill additional holes. Mix up plaster of Paris to a paint-like consistency, adding a spoonful of vinegar to slow its setting. Heap the plaster in shapes to simulate snow drifts, pile it on one side of the "trees" as though it had drifted. Add glitter and sparkle to the scene

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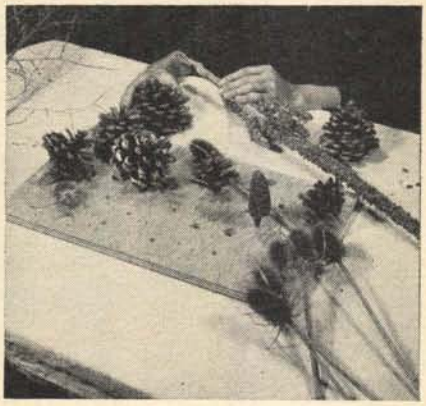
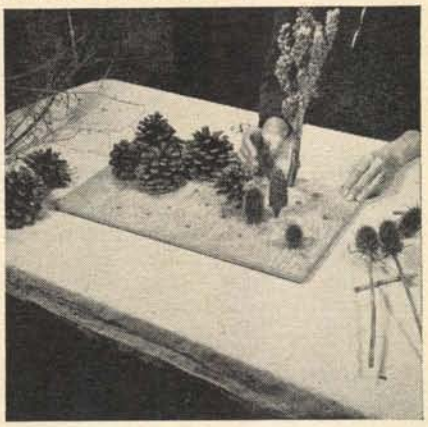
with glitters, sequins, tiny ornaments, small figures, etc. The final step is to spray snow on the scene from an aerosol can. Hold the container a foot or so above the scene and let the spray fall over the entire layout. In some areas, spray from the side so it will appear the wind has drifted the snow. △ △



**First step after board has been cut and drilled is to arrange temporarily the items until you arrive at a pleasant and natural looking scene. If necessary, drill extra holes to improve layout.**



**To make stems of weeds and plants fit holes, trim them down, or wrap with tape. Dip the stems in glue before inserting them to make sure they will stay in position you place them.**

**If you prefer, some of the decorating can be done before pieces are set. Start with thin mixture of plaster, switch to thicker solution later to add "blanket of snow" effect to "trees."**

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Although this picture frame is inches deep and provides "shadow-box" effect, it is shaped from 1-in. hardwood stock.

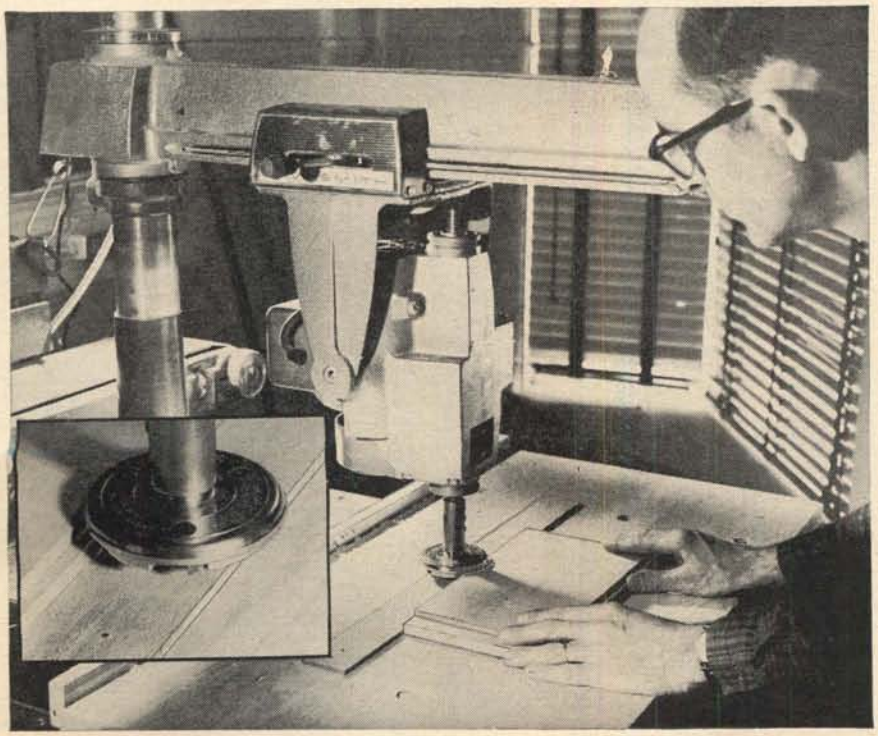
# Versatile and Safe PLANER-SHAPER

IF YOU OWN A DRILL press or a multipurpose tool that can be set up as a vertical drill press, or a radial-arm saw, you should own a Safe-T-Planer. We awarded the tool our Shop-Tested Seal because of its amazing versatility, modest cost and safety features.

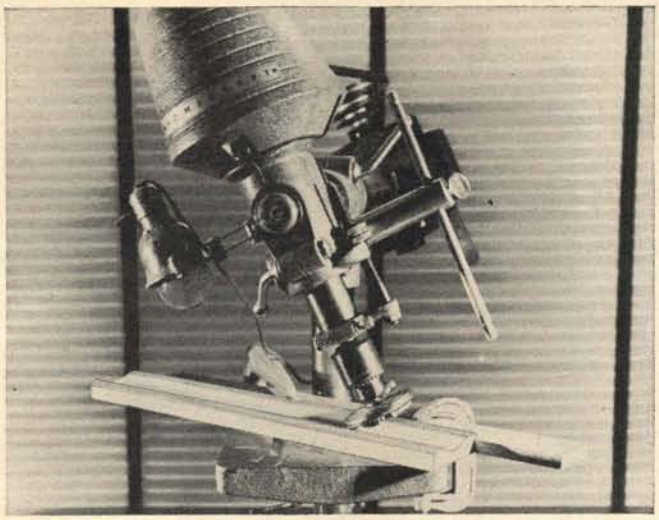
The designer of the tool demonstrated a number of its many uses in our Model Shop, then our staff tested it for several weeks on various machines. Incidentally, when ordering a Safe-T-Planer, describe the tool on which it will be used. The shank of the tool will fit in any chuck with ½ in. capacity, but an adapter is required to fit it to various types of radial-arm saws.

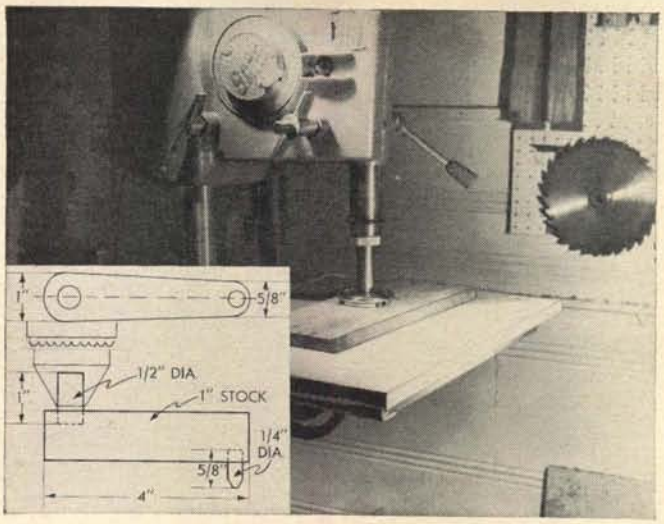
When the planer is used for surface planing, Fig. 3, it is necessary to use an auxiliary plywood table that is shimmed to be exactly parallel with the tool in all directions. Instructions with the planer describe how to make a device for checking the table, Fig. 3.

Regular 1-in. hardwood stock can be shaped to make an inches-deep picture frame. The planer will cut rabbets, Fig. 1, make bevels, Fig. 4, shape panels for doors and make fancy rosettes. It will not "kick" the work or "hang up." Tipping the tool (or table), at an angle changes the profile of the cut, and running the stock across the table at an angle, Figs. 2 and 5, changes the profile even more. (With the motor of a radial-arm saw positioned vertically you can get some really wild compound angles.) Our recommendation is to buy one and start experimenting. Price is $11.75 ppd. from Gilmore Pattern Works, 1164 N. Utica, Tulsa 10, Oklahoma. △ △



1. Tool is used here for cutting rabbet, on SawSmith radial-arm saw. Note sleeve adapter to fit planer to righthand shaft.

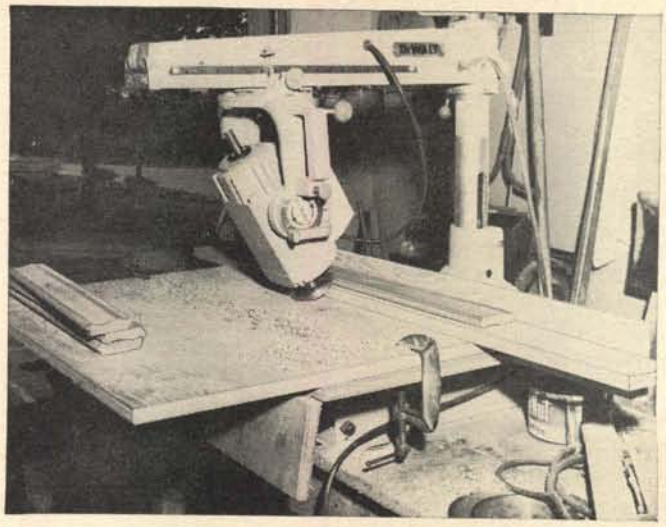


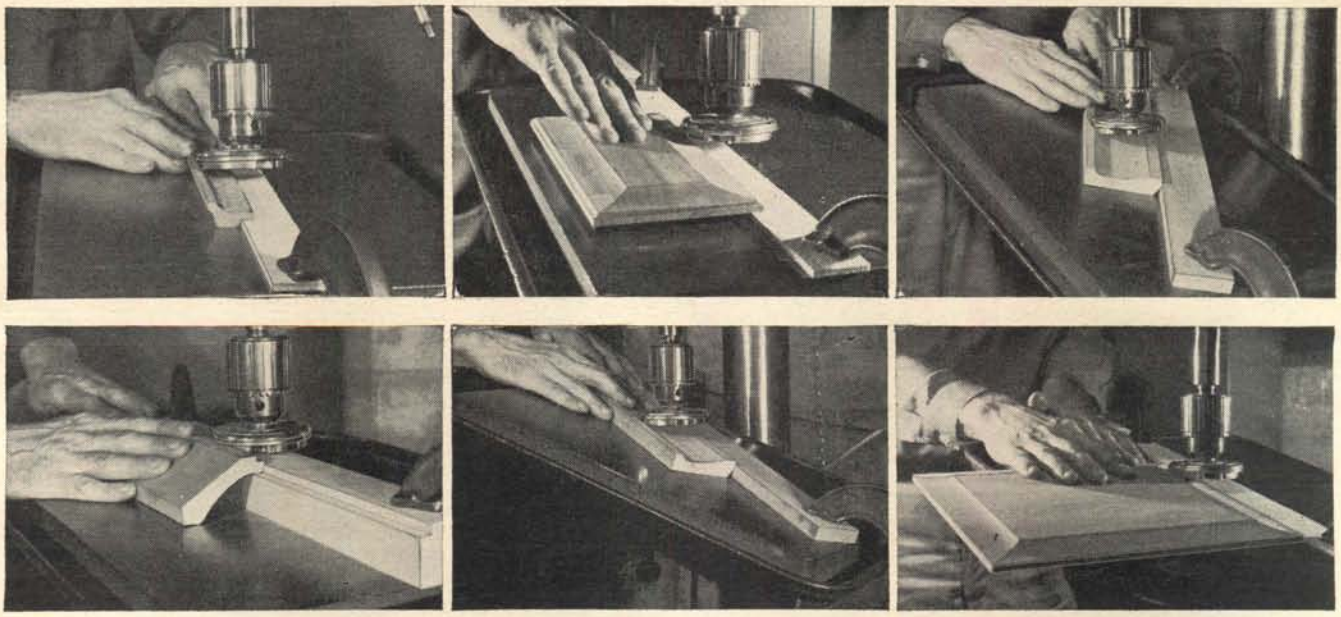



2. On Rockwell radial-arm drill press, head is tipped at angle, stock moved across table at angle to produce deep curve in wood for making picture-frame stock, such as in lead photo of article.

3. ShopSmith is set up as vertical drill press when planer is used. It was necessary to use auxiliary plywood table to provide true surface for accurate surface planing of stock, as shown here.

4. DeWalt Power Shop required shortening shank of tool, and shortening adapter to provide more clearance between tool and surface of table. Bevel is being cut on edges of frame stock.





5. The infinite variety of shapes that the tool can produce are due to the great number of angles at which the planer can be positioned. Tool can surface-plane, cut rabbets and bevels, cut large and small radii. One definite advantage is that it can be used to surface-plane rough stock; rough stock is cheaper than finished material.

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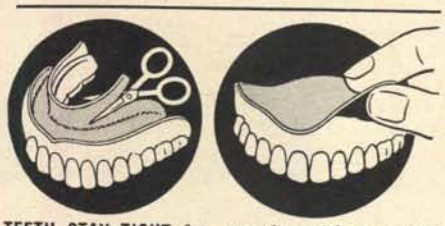

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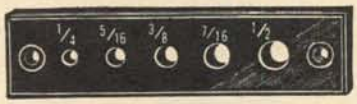


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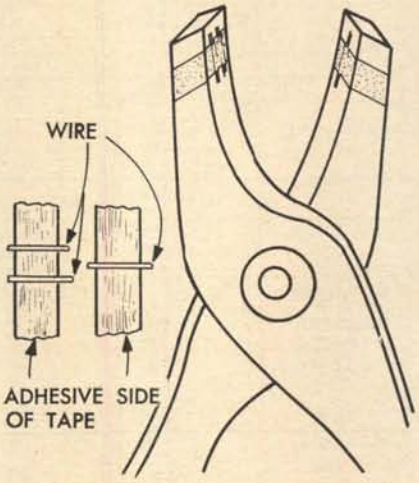
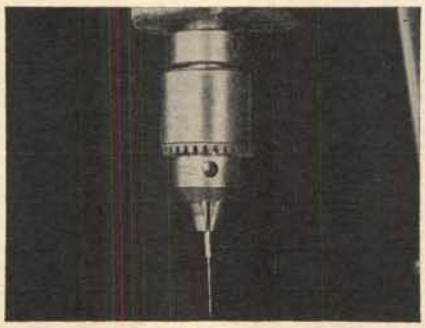
# SHOP TIPS

## Improvised Crimping Tool




Save your fingers when fitting together stovepipe or light-gauge ducts by using this improvised tool to crimp the metal and reduce the size of one of the pipes. To make the tool, tape a brad, or ½-in. length of wire to one jaw of a pair of pliers, two brads to the other, as indicated.
*Daniel Bousha, Jackson, Mich.*

## Solder "Casing" For Bits

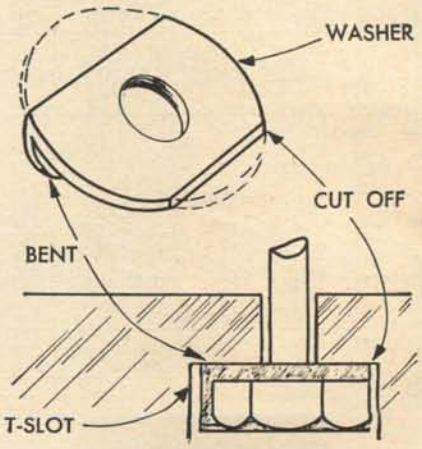


Many drill chucks will not close tight enough to grip a No. 50 or smaller bit. If this is your problem, snip off a short length of cored solder and force the drill into the core. The bulked end then can be tightened in the chuck.
*De Cristoforo, Calif.*

## Clean Saw Table

You can work more safely, keep the work cleaner, if the saw table is clean. Use a pad sander with fine paper to renew the surface, then dust carefully and apply paste wax. Occasionally use lacquer thinner to remove the old wax and clean the surface, then renew the wax.
*De Cristoforo, Calif.*

## T-Slot Bolts




If the heads of the bolts used in the T-slots of a machine table are too small and turn, they can be fitted with a modified washer to prevent them from rotating. Cut off one side of a washer, bend the other side down, as indicated. The washer then acts as a "brake" to prevent the bolt from turning.
*Daniel Bousha, Jackson, Mich.*

## Screw-Length Gauge

For fast sorting of wood screws according to length I use a rule that is painted a different color each ½ in. The drawer fronts of the screw cabinet are painted corresponding colors, so a quick measurement as indicated, shows in which drawer the particular screw should be stored.
*Arthur Tanner, Poughkeepsie, N.Y.*

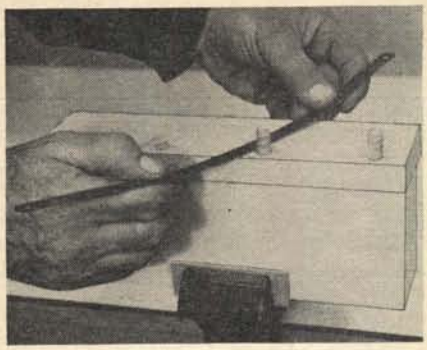
## Small Power Brushes

Small bronze wire brushes on gun-cleaning ramrods make excellent rotary wire brushes when chucked in a drill motor. Ideal for intricate details on models and filigree work where ordinary brushes and buffers cannot reach.
*R. Beasley, Jackson, Mich.*

## Top For Glue Bottle

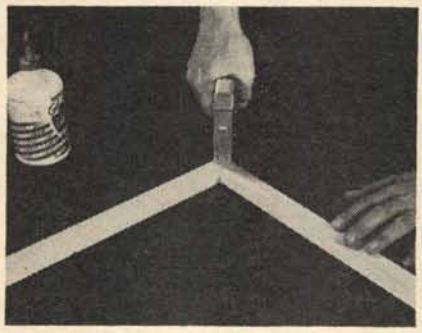
Invariably the small caps that come with plastic glue bottles get mislaid. A bent aluminum nail (steel will rust in water-soluble glues), sometimes is used, but does sometimes get stubborn when full of glue. I just bore a hole in a block of wood and jam it over the plastic nozzle of the bottle. It is easily removed, is difficult to misplace.
*C. Kimbrough, Prairie Village, Kans.*

## Flush-Sawing Dowels



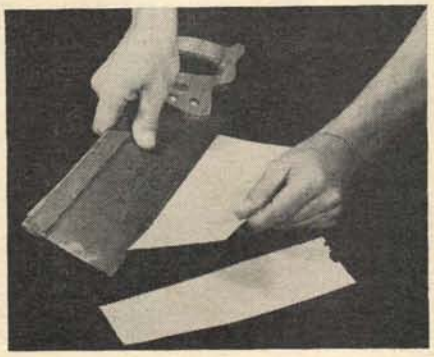
To cut off the projecting end of a dowel so it is flush with a wood surface, use a hacksaw blade out of the frame. With finger pressure you can hold the blade just above the surface of the work so the dowel is cut, but the blade does not damage the surface.

## Stapling Miter Joints



Holding together the mitered corners of picture frames while you glue and nail them can be tricky. Staple the corners from the back side of the frame to help. On small-size frames the staples may be all the fastening necessary.

## Tearing Sandpaper



The toothed edge of a hand saw makes an excellent guide for ripping sheets of sandpaper to a particular size. Bear down on the blade and pull the paper smartly.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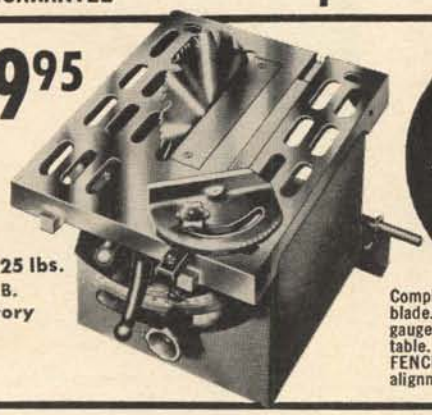

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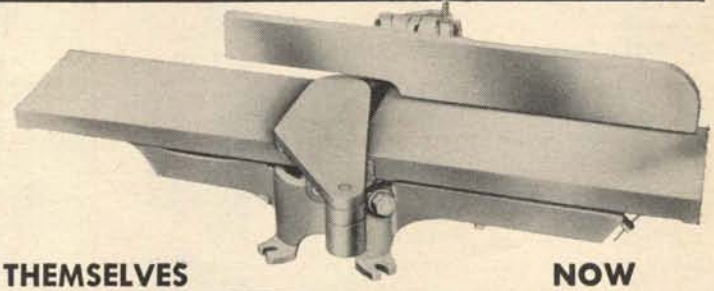

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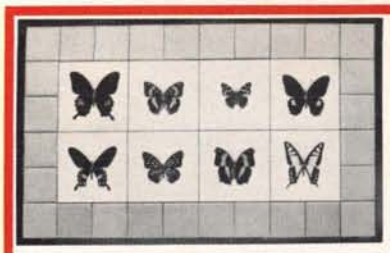

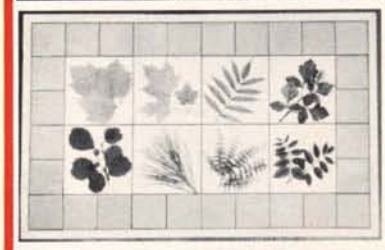

## REAL BUTTERFLY TILES

**Permanently Preserved**

in Castoglas. This is a coffee-table top. You may also use it as a tray or wall decoration. Collect your own butterflies to embed or buy specially prepared ones at little cost. Colorful fall leaves from your own garden, like those illustrated at left, are ideally suited to this type of work. The surprisingly simple process is illustrated in "HOW TO CAST NATURE TILES", priced at 25c.

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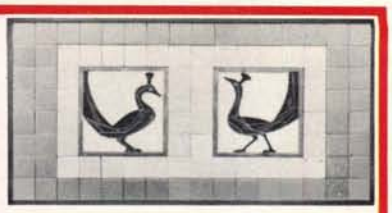

## WILD FLOWER PLACEMATS

**The Sweet Peas Are Real**

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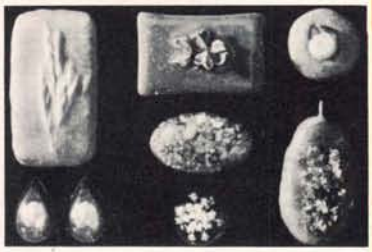

## WILD FLOWER JEWELRY

**Grasses, Seed Pods, Flowers**

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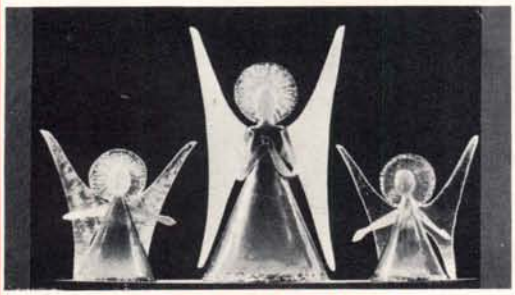

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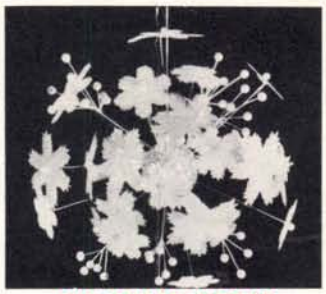

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